Waste Discharge Requirements
for Growers within the Sacramento River Watershed
that are Members of a Third-party Group
Order Number R5-2014-xxxx

RESPONSE TO COMMENTS

The California Regional Water Quality Control Board, Central Valley Region (Central Valley Water Board or "board") has provided opportunity for the public to submit written comments on the tentative Waste Discharge Requirements for Growers within the Sacramento River Watershed that are Members of a Third-party Group, Order R5-2014-xxxx (referred to as the "tentative Order" or "Order"). This document contains written responses to comments that were timely received on the tentative Order.

The tentative Order was released for public review on 19 December 2013 with the comment period ending on 21 January 2014. Nine comment letters received by the deadline. They were submitted by:

1. Sacramento Valley Water Quality Coalition
2. El Dorado County Agricultural Water Quality Management Corporation
3. El Dorado County Farm Bureau
4. California Farm Bureau Federation
5. United States Fish and Wildlife Service
6. California Department of Fish and Wildlife
7. Cosumnes River Preserve
8. Sacramento River Source Water Protection Program
9. California Sportfishing Protection Alliance and California Water Impact Network

Prior to circulating the tentative Order for public comment, the board circulated a "draft" Order for public review. The draft public review and comment process that the board engaged in is not required by law or policy, but was conducted to help the board work with dischargers and other interested parties to develop the best possible policies for the protection of water quality while maintaining the viability of the Central Valley's agricultural industry. The draft review period began on 12 September 2013 and closed on 11 October 2013. In addition, a workshop was held in Colusa on 30 October 2013. The public provided additional comments and the board provided direction to staff. The board staff did not develop written responses to comments on the draft Order, however comments were taken into account and multiple changes to the draft Order were made and were reflected in the tentative Order. In addition, the tentative Order reflected direction given to staff from the board at the workshop.

Comment Summaries and Responses

Comment Letter 1 - Sacramento River Water Quality Coalition

1-1. Rice Seed Growers covered under the California Rice Commission Order

Comment summary: Growers of rice for seed should be covered under the California Rice Commission Order. It is requested that this be stricken from the Sacramento River Watershed Order.

Response: The board staff agrees with the commenter and has removed references to rice seed in the Order.

1-2. Contribution to exceedances

Comment summary: WDR Sections III.A and B state that, "Waste discharged from Member operations shall not cause or contribute to an exceedance of applicable water quality objectives…" in surface water and groundwater. The Commenter asks how much of a "contribution" is necessary to require management practices implementation and how exceedances that could be from non-irrigated lands or background would be considered.

Response: If a Member is contributing to an exceedance of water quality objectives, then the Member must implement practices to come into compliance with the receiving water limitations and any applicable farm management performance standards. There is no quantification of the degree of contribution to an exceedance necessary to require that management practices be improved. Note that responses 4-5 and 4-9 provide discussion of contribution to a water quality problem. See MRP-1 for a discussion of how background and other sources can be considered. Also see response to comment 1-11.

The commenter did not request any specific changes to the Order.

1-3. "Crop need" vs. "crop consumption" in regards to nutrient application practices

Comment summary: The commenter notes a word change between the administrative and the tentative drafts, and asks why the change was made. Specifically, in Section IV.B.8 of the WDR, "crop consumption" has replaced "crop need" when describing nutrients applied to crops.

Response: Board staff originally used the terms "need" and "consumption" interchangeably, which could cause confusion or misinterpretation of the requirements. "Crop need" may be interpreted as the quantity of nitrogen recommended by an adviser or institution to be applied to the crop as fertilizer. This amount may exceed the amount that would actually be taken up by the plants in a given field to account for inefficiencies. "Crop consumption" on the other hand is the nitrogen that is taken up by the plant (see Attachment E definition of "nutrient consumption").

The commenter did not request any specific changes to the Order.

1-4. Deadline to Provide a Notice of Confirmation (NOC) form to members

Comment summary: The commenter requests that WDR section IV.C.7, which requires the third-party to inform Members of the Order's requirements and provide them with NOC forms within 45 days of receiving the Notice of Applicability, be changed to require these processes during the regular annual invoicing cycle.

Response: Board staff has amended the text in Section IV.C.7 for consistency with Section VII.A.1, which will allow the Members to submit their NOC as part of regular third-party invoicing.

1-5. Providing "a notice of requirements and process…"

Comment summary: In reference to WDR Section VII.A.1, the commenter asks if the third-party or the Water Board will develop the "requirements" that the Member must provide to non-Members.

Response: Board staff expects that the Member would provide to the non-Member the same summary of requirements as described in section IV.B.18.

1-6. Farm Evaluation submission timing
Comment summary: The commenter expresses appreciation for the five-year reporting cycle for low vulnerability areas, and appreciation that the timing will tie management practices to monitoring results in areas seeking the reduced monitoring option.

Response: No change is being requested, so no further response is necessary.

1-7. Farm maps retained on-site
Comment summary: The commenter appreciates the inclusion of WDR footnote 22. This change will simplify and expedite completion of the Farm Evaluations.

Response: No change is being requested, so no further response is necessary.

1-8. Modifying or commenting on templates
Comment summary: The language in WDR Section VIII.C was changed such that the third-party has 30 days to "comment on" Executive Officer-provided templates rather than 60 days to request to "modify" the templates. A request is made to return to the previous language.

Response: The board recognizes that templates used in certain geographic areas in the region may need to be different from templates used in other areas. Per section VIII.C. of the Tenative Order, the third-party and other interested parties will have 30 days to provide comments on the templates proposed for the Sacramento Valley. This comment step will occur prior to the Executive Officer providing the final templates. Once those templates are provided (with potential modifications based on comments), the Tentative Order requires the Member to use those provided templates. This process allows for some flexibility while ensuring that similar data is reported to the board in a consistent format. Staff does not agree that the proposed revisions are necessary.

1-9. Timing of providing templates to Members
Comment summary: WDR Section VII.C states that the third-party shall provide templates to Members within 90 days of the Executive Officer's issuance of the Notice of Applicability, or approximately 120 days after Regional Board action. The commenter requests that the requirement be tied to a firm calendar date, and suggests that the date be in October or November 2014.

Response: The requested change has been made in the Tentative Order to 30 October 2014.

1-10. Timing and submission of list of collective sediment and erosion control plan growers
Comment summary: WDR Section VIII.F requires the third-party to submit a list of Members who are participating in a watershed/subwatershed based (or collective) sediment and erosion control plan. The commenter requests that the third-party be required only to compile a list, and that the time period for the third party to submit the list be 120 days after the Regional Board Executive Officer accepting the third-party's Sediment and Erosion Control Assessment Report.

Response: Board staff does not agree with the proposed revisions. Members are required to identify whether they are opting to participate in a collective sediment and

erosion control plan within 60 days of the Executive Officer's approval of the Sediment and Erosion Control Assessment Report (Report). Thirty days from the Member deadline (a total of 90 days from submittal of the Report) should be sufficient time to compile and submit the list to the board. The commenter appears to suggest that the timeframe between compiling the list and submitting it should be thirty days. Once compiled, submitting the list should require little effort. It is not necessary to provide additional time as requested. Additionally, to conduct effective outreach and enforcement, board staff will need to know which Members will be part of a collective sediment and erosion control plan and which Members will require individual plans well before the deadline for preparation of the individual plans.

1-11. Management Plan processes

Comment summary: The commenter expresses concern that the procedures for Management Plans described in WDR Section VIII.I.1 and Appendix MRP-1 will require Management Plans even when non-agricultural sources cause water quality trigger limit exceedances. The commenter requests staff to clarify that the optional, initial Source Identification Study is a possible precursor to Management Plan implementation.

Response: The text in Section VIII.I.3 of the WDR states that the Executive Officer may determine that the Management Plan is not required if there is enough evidence indicating that irrigated agriculture does not cause or contribute to the water quality problem. The Source Identification Study option is described in MRP-1, in the first paragraph in Section I and in Section I.G. Staff believes the commenter's concerns are already sufficiently addressed by the current language in the Order that indicates the third-party may propose studies "…to eliminate irrigated agriculture as a potential source…" (MRP-1, Section I), and that management plans may be developed and prepared after a "irrigated lands are identified as a source" of the water quality problem. (MRP-1, Section I.G).

1-12. Discontinuing Management Plan monitoring

Comment summary: The commenter asks for clarification on when current Management Plans that have no recurring water quality exceedances will be allowed to discontinue monitoring for that parameter.

Response: Monitoring associated with Management Plan may be discontinued when the Management Plan is deemed complete by the Executive Officer as described in MRP-1, Section III.

1-13. Pilot Programs and the reduced monitoring option

Comment summary: The reduced monitoring/management practice verification option is described in MRP Section III.C.1.a. The commenter requests that areas that are participating in the Management Practices Pilot Programs under the current waiver be permitted to forgo monitoring in 2015 unless there has been a significant change in agricultural land use and crop mixtures.

Response: Staff does not propose to remove the 2015 monitoring requirements for Pilot Plan participants. While the reduced monitoring/management practice verification option is similar to the Management Practices Pilot Program, the requirements are not identical. One of the Tentative Order's requirements associated with the reduced monitoring option is to conduct comprehensive monitoring one of every five years. Given that the Pilot Programs were first approved in 2010, it is reasonable for the first

year of comprehensive monitoring to begin in 2015.

1-14. Low intensity agriculture and the reduced monitoring option

Comment summary: The reduced monitoring/management practice verification option applies only to areas where "there is a low intensity of agricultural land use in the subwatershed." The commenter requests that this condition be removed.

Response: The reduced monitoring/management practice verification option is intended to give areas where discharges from irrigated agriculture have a relatively lower potential to impact surface water quality a less costly process to confirm Member compliance. In intensively farmed areas (e.g., subwatersheds with tens to hundreds of thousands of acres; many streams dominated by irrigated agricultural discharge), the potential to impact surface water quality is always present based on the number of discharges and lack of dilution in agriculturally dominated waterways. The potential monitoring regime has already been reduced by allowing a representative monitoring program. Having no monitoring during certain years in areas with significant amounts of agricultural discharge would leave the board with no water quality data regarding streams most susceptible to impacts from irrigated agricultural discharges. Staff does not believe the proposed revisions are appropriate. However, staff has provided clarification regarding the meaning of the term "low intensity agricultural land use".

1-15. Monitoring more than once a month

Comment summary: The commenter is concerned that monitoring may be required more than once per month, and requests that the language in Section III.C.2 be changed to ensure monitoring during at least two storm runoff events each year, without referring to the possibility of monitoring more than once per month.

Response: Staff does not propose to make the requested changes in MRP section III.C.2, which reads: "[a]dequate characterization of the presence of some pollutants may require monitoring more than once per month." This requirement is not related exclusively to the storm monitoring requirements, which were previously modified to address this concern as it related to storm monitoring. As it stands, the language in the Tentative Order requires the third-party to identify the appropriate frequency for each constituent being monitored. It is staff's intent that the Order be read to require monitoring more than once per month if a constituent's use and/or chemical characteristics warrant more frequent monitoring in order to verify compliance.

1-16. Monitoring pesticide degradates

Comment summary: The commenter requests a change in the language for MRP footnote 5. The footnote describes the pesticide degradates to be included in the monitoring program.

Response: Board staff does not propose to make the requested changes in MRP footnote 5. Board staff believes the current footnote is clear and necessary. As written, the requested change could require analysis of parent compounds that may not warrant testing and has no provision for exempting the compound from further analysis when commercial analytical methods are not available.

1-17. Reporting of individual management practice data records

Comment summary: MRP section V.C, Report Component 20 requires that the third-party aggregate management practice data at the township level for Annual Monitoring Reports. In addition, the individual data records are required electronically, identified to

the township level and with Member and parcel identification removed. The commenter objects to the inclusion of these individual records. The commenter indicates that tracking information at the individual level and township level will require two redundant data management efforts.

Response: Individual data records of management practices information are needed to verify that growers are implementing relevant management practices to protect water quality. Submittal of farm evaluations will provide information on individual grower implementation of practices to protect water quality, in lieu of water quality sampling of individual farming operations. The data are needed to verify that growers are implementing relevant management practices to protect water quality. The aggregation of the data at the township level will allow for summary level analysis and will help identify those geographic areas requiring follow-up. Staff does not agree with the commenter's assertion that summarizing data at the township level and providing individual data records requires redundant data management. Each individual data record can be provided in one GIS data layer with the data record associated with the township where the farming operation is located. This does not require an additional data management system, but only an additional data field in the database. Further discussion of the basis for this requirement can be found in the Information Sheet in the section "Spatial Resolution of Nitrogen Management Plan and Farm Evaluation Information".

Comment Letter 2 - El Dorado Agricultural Water Quality Management Corporation

2-1. Reduced Monitoring/Management Practices Verification Option

Comment summary: The commenter appreciates the inclusion of this option in the Monitoring and Reporting Program.

Response: No change is being requested, so no further response is necessary.

2-2. Inspection of facilities

Comment summary: WDR Section IV.B.13 and footnote 21 describe the conditions under which Member facilities may be inspected. The commenter requests that the definition of facilities be specific to "those facilities associated with the irrigated agricultural operation." Members may have facilities that are not associated with their irrigated agricultural operations and which are located on site. The commenter states that such facilities should not be subject to inspection under this Order.

Response: Staff does not believe the requested change is necessary, since the referenced section states that the purpose of the inspections is to determine whether the Member is complying with the conditions of the Order. Facilities not associated with the irrigated lands operation would not be subject to the conditions of the Order, and, therefore, are not subject to the inspections discussed in Section IV.B.13. Further, Section IV.B.13 clarifies that, if required by section 13267(c), inspections of facilities and irrigated lands will be conducted only if consent to conduct the inspection is provided or if an administrative search warrant is obtained.

Comment Letter 3 – El Dorado County Farm Bureau

3-1. Reduced Monitoring/Management Practices Verification Option

Comment summary: The commenter appreciates the inclusion of this option in the Monitoring and Reporting Program.

Response: No change is being requested, so no further response is necessary.

3-2. Administrative costs and burdens

Comment summary: The commenter contends that the administrative burden of adding new member data and reporting requirements adds expenses that must be borne by Members, imposing a disproportionate burden on small farms and ranches. The commenter states that the economic effect on El Dorado County growers is understated.

Response: Board staff agrees with the commenter that compliance with the Order will add costs that will be borne by growers. However, staff does not agree with the statement that the economic effect has been understated or with the premise that the costs are unreasonable. The commenter has not provided any data or information by which staff can evaluate the commenter's assertion.

Comment Letter 4 - California Farm Bureau Federation

4-1. Similarities between the Tentative Order and other Long-Term ILRP WDRs

Comment summary: The commenter contends that the Tentative Order is a duplication of previously adopted Long-term ILRP WDR's with only minor revisions. The commenter also contends that each coalition represents unique geographic characteristics and that each general order should be individually drafted specific to the region it regulates.

Response: Board staff acknowledges similarities between the Tentative Order and other waste discharge requirements (WDR's) within the Long-term ILRP. The similarities in structure are purposeful, since these WDR's deal with discharges from irrigated lands to groundwater and surface water. It is appropriate for the general approach and regulatory structure for addressing similar discharges to be similar. The general approach of monitoring surface water and groundwater quality, conducting studies to determine whether practices are protective of groundwater quality and reporting on key aspects of management practice implementation are fundamental to determining whether Members of the third-party are in compliance with the Tentative Order's requirements. The Tentative Order and other Long-term ILRP WDR's have a structure that includes treating high vulnerability areas and low vulnerability areas differently (more reporting and monitoring requirements are associated with high vulnerability areas).

While there are similarities between the Orders, there are key differences as well. For example, the surface water monitoring program is different in the Tentative Order than other Long-term ILRP WDR's. In addition, the reports provided by the third-party (e.g., the Groundwater Quality Assessment Report or GAR) will be based on the area-specific conditions, which in turn, will drive the regulatory approach (e.g., identification of the high vulnerability areas where growers need to submit nitrogen management plan summary reports). In addition, provisions have been added to the Order based on input from the Coalition, including a reduced monitoring/management practice verification option and an option for a watershed/subwatershed based sediment and erosion control plan.

The templates to be developed by the water quality coalitions and commodity groups for required reports are an example of a similarity that will benefit all growers by simplifying reporting requirements. There are also provisions in the Tentative Order that provide an opportunity for the third-party to submit comments on the templates regarding any changes that should be made to reflect the unique conditions in the area.

The commenter does not provide any examples or suggestions of what should be changed in the tentative Order to tailor it to the area covered.

4-2. Definition of Waste

Comment summary: The commenter contends that the Tentative Order's definition of waste is an overly broad expansion of a statutorily defined term and the term waste should be limited to its definition found in §13050(d) of the California Water Code. To provide clarity the second sentence (Attachment E.48) should be revised to "Potential examples of wastes from irrigated lands…may conform to …".

Response: Section 13050(d) of the Water Code specifies that "'waste' includes sewage and any and all other waste substances, liquid, solid, gaseous, or radioactive, associated with human habitation, or of human or animal origin, or from any producing, manufacturing, or processing operation, including waste placed within containers of whatever nature prior to, and for purposes of, disposal." The definition of waste in the Tentative Order repeats this language word for word and also provides a citation to the Water Code §13050(d). For clarity purposes, the Tentative Order also provides examples of wastes that fall under the definition of waste in §13050(d). The commenters have not provided any evidence that the "wastes" potentially discharged from irrigated lands described in the Tentative Order would not fall within the Water Code §13050(d) definition of waste. All of the examples provided in the Tentative Order's definition of waste are in liquid, solid, or gaseous form and could be discharged as a direct result of crop production, livestock production (i.e., irrigated pasture), or wetland management (i.e., the human "production" or creation of wetland habitat), which are all activities of human origin.

Staff does not agree with the proposed revisions. The commenter implies with the revisions that the examples provided may not conform to the statutory definition of waste and staff believes that they do. The introduction of uncertainty as to whether certain wastes from irrigated agriculture conform to the Porter-Cologne definition would imply that the board has no authority to regulate the discharge of those particular wastes. Such uncertainty would add confusion to the Order and potentially lead a regulated discharger to believe certain wastes are not subject to regulation, potentially leading the discharger to violate the Order.

4-3. Regulation of water quality: Scope of coverage

Comment summary: The commenter believes that the language in Finding 5 of the Tentative Order should be revised to include specific provisions limiting regulation of water traveling within on-farm conveyance structures and between farm conveyance structures and water that leaves the root zone. The commenter also believes that the Order should not address lawful application of soil amendments, fertilizers, or pesticides.

Response: The Tentative Order does not exempt water in conveyance structures that are operated by multiple Members or that run through or along multiple Members

properties and such an exemption is not intended or described by Finding 5. A discharge of waste by a Member into a channel that is used by other Members may result in a negative impact to the beneficial uses of that water for those other Members, or to other designated beneficial uses.

Once the water and any wastes associated with the water are out of the control of the Member or not being beneficially used by the crop, it is consistent with Porter-Cologne and appropriate for the board to subject that waste discharge to the requirements of the Order. The request to state that the Order is not intended to address soil amendments, fertilizers, and pesticides suggests that the discharge of those constituents to surface water and groundwater should not be regulated. Board staff disagrees. The purpose of the Tentative Order is to regulate discharges of waste that could affect water quality.

Staff believes the finding provides clear limitations on the application of the Order and does not agree with the changes that would effectively severely limit the scope of the Order.

4-4. Beneficial Uses and Basin Plan amendment

Comment summary: The commenter appreciates the inclusion of a process for the third-party to pursue a basin plan amendment to address the appropriateness of a beneficial use and acknowledges that specific beneficial use designations may be unattainable.

Response: No change is being requested, so no further response is necessary.

4-5. Compliance with the California Environmental Quality Act (CEQA)

Comment summary: The Tentative Order is not sufficiently within the range of the Program Environmental Impact Report (PEIR) because it includes provisions substantially different from elements in the PEIR alternatives, such as end-of-field discharge limitations, farm management performance standards, and associated costs. The commenter believes that reliance of the PEIR for CEQA compliance is inappropriate and that a supplemental EIR should be prepared.

Response: As described in the Information Sheet to the Tentative Order (Attachment A), the requirements of the Order include regulatory elements that are also contained in the six alternatives analyzed in the PEIR; therefore, Staff believes that the Tentative Order is sufficiently within the range of alternatives evaluated in the PEIR.

As a preliminary matter, Board staff disputes the commenter's contention that the tentative Order's receiving water limitations would establish water quality objectives as "end-of-field" discharge limitations. The Tentative Order does not include "discharge limitations," but includes "receiving water limitations." The limitations establish that discharge from the field must not cause or contribute to exceedance of water quality objectives in receiving waters, unreasonably affect applicable beneficial uses, or cause or contribute to a condition of pollution or nuisance. For example, consider a field discharging directly to a surface water body. If the field's discharge contains waste at a level greater than a water quality objective, but the surface water receiving the waste remains below the water quality objective, the limitation is not violated. However, if the same discharge causes the receiving water to exceed a water quality objective, the receiving water limitation would be violated. Similarly, if the same discharge is above water quality objectives and the receiving water is above objectives, that discharge is

contributing to an exceedance of the water quality objective and, therefore would be violating the receiving water limitation. In the scenario where the waste discharge is below the water quality objective and the receiving water exceeds objectives, the receiving water limitation would not be violated.[1]

The potential environmental effects of implementation of receiving water limitations in the ILRP have been evaluated in the PEIR. Regulatory requirements for Alternatives 2-5 of the PEIR, on which the tentative Order is based, include the requirement that dischargers prevent nuisance conditions and/or exceedance of water quality objectives in state waters associated with waste discharge from their irrigated agricultural lands. This requirement is similar to the tentative Order's receiving water limitations.

Even assuming, for the sake of argument, that the receiving water limitations were not already analyzed in the PEIR, the commenter still has not demonstrated that reliance on the PEIR is improper. A public agency may rely on a program EIR for CEQA compliance, for subsequent program activities if it "finds pursuant to Section 15162, no new effects could occur or no new mitigation measures would be required." CEQA Guidelines § 15168(c). Board staff has proposed the required finding in Attachment D of the tentative Order. The commenter provides the general concern that environmental impacts have not been adequately addressed, but provides no substantive information on why it disagrees with the proposed finding (e.g. the types of unaddressed impacts or additional mitigation measures that may be necessary).

The remaining concern that the tentative Order's farm management performance standards would apply requirements not analyzed in the PEIR, potentially leading to additional environmental impacts, is also unfounded. The commenter does not provide justification or examples supporting the claim that farm management performance standards are outside of the scope of the PEIR and that costs associated with farm management performance standards were not considered during the economic analysis portion of the PEIR.

Even assuming, for the sake of argument, that the performance standards were not already analyzed in the PEIR, the commenter still has not demonstrated that reliance on the PEIR is improper. A public agency may rely on a program EIR for CEQA compliance, for subsequent program activities if it "finds pursuant to Section 15162, no new effects could occur or no new mitigation measures would be required." CEQA Guidelines § 15168(c). Board staff has proposed the required finding in Attachment D of the tentative Order, along with a listing of potential environmental impacts, the written findings regarding those impacts consistent with CEQA Guidelines, and the explanation for each finding. The commenter provides the general concern that environmental impacts have not been adequately addressed, but provides no substantive information on why it disagrees with the proposed finding (e.g. the types of unaddressed impacts or additional mitigation measures that may be necessary).

The commenter also provides the concern that the board does not have the authority to require certain CEQA mitigation measures under the tentative Order. These very mitigation measures are identified in the PEIR and were unsuccessfully challenged on the same grounds in Sacramento Superior Court. On 21 May 2013, the Superior Court

[1] Note that this scenario could be more complicated for certain cases, such as a bioaccumulative substance, for which the concentration of the discharge may not be as important in determining whether beneficial uses are protected as the mass discharged.

issued a final ruling that rejected the claim that the identified mitigation measures were legally deficient, on the stipulation that "additional CEQA review" means that "if a future discretionary approval by the Board would require additional CEQA review, such review will be undertaken." The tentative Order relies on those lawful mitigation measures, which have been clarified consistent with the final ruling. The Board staff continues to rely on the PEIR's mitigation measures, absent a final court ruling that they are legally deficient. *Kriebel v. City Council* (1980) 112 Cal.App.3d 693, 702.

4-6. California Water Code Section 13141 and 13241

Comment summary: Section 13141 of the California Water Code states in part that "prior to implementation of any agricultural water quality control program, an estimate of the total cost of such a program, together with an identification of potential sources of financing, shall be indicated in any regional water quality control plan". The commenter states that Finding 40 incorrectly concludes that a new cost analysis is unnecessary given that the Basin Plan includes an estimate of potential costs and sources of financing for the Long-term ILRP. The commenter contends that the Tentative Order proposes new costly regulatory components not previously analyzed during the environmental review or when adopted in the Basin Plan.

Response: Board staff disagree that the Tentative Order proposes new regulatory components that were not considered during the environmental review (see Response 4-5 above). The economic analyses completed within the PEIR and subsequent incorporation of these cost estimates into the Basin Plan sufficiently addresses §13141 and §13241 of the California Water Code.

The State Water Board recently concluded that Water Code section 13141 is "applicable only to an agricultural water quality control plan that is adopted within a water quality control plan."[2] Since staff is proposing that the Board adopt the agricultural water quality control plan within waste discharge requirements as opposed to the Board's Basin Plan, the tentative Order cannot violate Water Code section 13141 here, as the statute is not applicable.

Nevertheless, the Central Valley Water Board prepared a cost estimate for the long-term irrigated lands regulatory program, and added it to its Basin Plans prior to implementation of this Order. The State Water Resources Control Board approved these Basin Plan amendments on 17 July 2012. To estimate costs for the tentative Order, the Board staff used the same study used to develop the Basin Plan amendments and supplemented the study based on the tentative Order's requirements. Finally, Board staff has confirmed that the estimated costs of the tentative Order fall within the range included in the Basin Plan estimate. Adoption of the tentative Order would not violate Water Code section 13141.

In addition, the Information Sheet includes a discussion of how costs were considered (see Section XV) and how those costs were derived from costs associated with elements of the PEIR alternatives. These costs include estimated costs associated with the plans and reports that are required from members and provided to them as templates to be completed. No further cost analysis is required by Water Code section 13241 and no evidence has been provided to demonstrate where the cost estimates are deficient.

[2] See State Water Board Order WQ 2013-0101, *In the Matter of the Review of Conditional Waiver of Waste Discharge Requirements Order No. R3-2012-0001,* at p. 15

4-7. Coordination and cooperation with other agencies

Comment summary: The commenter recommends adding the following as an additional finding under the Coordination and Cooperation with Other Agencies section of the Tentative Order:

"The United States Department of Agriculture Natural Resources Conservation Service (NRCS) administers a number of programs related to water quality. NRCS can provide technical assistance to growers and has identified practices that are protective of the environment and are feasible in an agricultural setting. The NRCS Environmental Quality Incentives Program (EQIP) provides cost share assistance for management practice installation. The NRCS has also provided assistance with research of management practice effectiveness. The third-party and its Members are encouraged to utilize the information and resources available through the NRCS to meet the requirements of this Order."

Response: The proposed finding regarding NRCS has been added to the Tentative Order.

4-8. Nitrogen Management

Comment summary: The commenter appreciates the adjustment of nitrogen management plan deadlines and the acknowledgement of the assessment of nitrogen management and control currently underway by the California Department of Food and Agriculture's Task Force, as well as the soon to be convened State Water Resources Control Board's Expert Panel.

Response: No change is being requested, so no further response is necessary.

4-9. Receiving water Limitations

Comment summary: The use of "shall not cause or contribute" to an exceedance of applicable water quality objectives is overly expansive and creates an unreasonable standard that is undefined, ambiguous, and holds farmers and ranchers liable for even the smallest de minimus contribution. The commenter proposes the addition of a qualifier before the word "contribute" in Provisions III.A and III.B of the Tentative Order. Alternatively the commenter suggests a wording for a description of discharge limitations.

Response: In light of the discussion in Response 4-5, board staff disagrees that the receiving water limitations make irrigated agriculture accountable for de-minimus discharges. Only discharges causing or contributing to the exceedance of the objective would be in violation of the receiving water limitation. De-minimus discharges (e.g., below water quality objectives) can actually improve receiving water quality for the constituent of concern.

4-10. Nitrogen Management Plans

Comment summary: Rather than requiring all growers to prepare nitrogen budgets and plans, as Provision 8 is currently written, the Tentative Order should be revised to allow flexibility in the requirements for those areas that have no or a lower propensity to impact water quality.

Response: Board staff disagrees that nitrogen management planning requirements should be reduced for growers outside high vulnerability areas. Low vulnerability areas

are not “no vulnerability” areas. The potential to discharge waste that could affect groundwater from irrigated agricultural operations exists in these areas even if physical or hydrologic site conditions do not warrant a high vulnerability designation. The impacts from irrigated agricultural application of nitrogen need to be addressed in all areas of the Tentative Order regardless of groundwater vulnerability designation. Nitrogen management planning is an efficient farming practice as well as a management practice that should help growers meet the requirement to minimize excess nutrient application relative to crop consumption. The Nitrogen Management Plan is kept on-site and Members in low vulnerability areas do not have to submit a Nitrogen Management Plan Summary Report to the third-party.

4-11. Farm Evaluation
Comment summary: The commenter appreciates the inclusion of footnote 23 specifying that any farm maps or information on the locations of wells does not need to be provided to the third-party.

Response: No change is being requested, so no further response is necessary.

4-12. Template requirements
Comment summary: The commenter states that the Tentative WDR (Section VIII.C) deletes the ability of the Coalition to provide modified templates and replaces it with the ability to solely provide comments. The commenter requests that language in the previous Draft WDR be reinstated and the last two sentences in section VII.D of Attachment A be deleted.

Response: Please see response to Comment 1-8.

4-13. Watershed/subwatershed based Sediment and Erosion Control Plans
Comment summary: The commenter expresses appreciation for the inclusion of watershed/subwatershed based plans, allowing growers the option to work together on sediment and erosion control, in lieu of preparing individual Sediment and Erosion Control Plans.

Response: No change is being requested, so no further response is necessary.

4-14. Changes to Reduced Monitoring/Management Practices Verification Option
Comment summary: A new element or bullet point should be added recognizing those areas with current pilot programs, and allow such programs to continue to be implemented as previously approved. The commenter also requests that the requirement that the agricultural land use must be low intensity be deleted, leaving the option available to any area in the Order area and subject to the approval of the Executive Officer.

Response: See responses to Comment 1-13 and 1-14.

4-15. Toxicity Testing
Comment summary: As currently drafted, the Tentative Monitoring and Reporting Program (MRP) language could be interpreted that both acute and chronic toxicity testing is required for all toxicity tests. The commenter recommends adding a footnote to section III.B.3 of the MRP to specify that the use of chronic testing is appropriate only for toxicity testing for *Selenastrum capricornutum*.

Response: Board staff disagrees with the commenter that the language could be interpreted that both acute and chronic toxicity testing is required for all toxicity tests and does not believe that the proposed footnote would provide further clarification.

4-16. Reporting of individual management practice data records

Comment summary: MRP section V.C, Report Component 20 Summary of Management Practice Information requires a third-party to provide the individual data records to the Regional Board in addition to aggregating and summarizing information collected in the Farm Evaluations. The commenter suggests this requirement be removed because it would not result in an efficient use of resources or the ability to assess and evaluate trends.

Response: See response to Comment 1-17.

Comment Letters 5 and 6[3] U.S. Fish and Wildlife Service, California Department of Fish and Wildlife

5-1. Benefits of managed wetlands

Comment summary: The commenter states that managed wetlands provide food and habitat for millions of resident and migratory birds of the Pacific Flyway each year and provide a host of public trust benefits including habitat for listed species, improved water quality, and flood management.

Response: Board staff agrees that managed wetlands provide important public trust benefits that should be preserved. Staff has added additional background to the Information Sheet, which includes discussion of the benefits of wetlands enumerated by the commenters.

5-2. Wetland management goals differ from agriculture

Comment summary: The commenter states that management of wetlands is fundamentally different from that of commercial agriculture. Goals and objectives for managed wetlands include sustainable water management and use; establishment and maintenance of aquatic and terrestrial fish and wildlife habitat and habitat conditions, legislatively mandated crop depredation for surrounding agricultural lands, water quality improvement, and visitor services.

Response: Board staff agrees that managed wetlands differ in many ways from irrigated agriculture. Staff has added additional background to the Information Sheet, which includes discussion of some of the differences enumerated by the commenters. However, in a number of instances, irrigated agriculture and other commercial agricultural activities are taking place in conjunction with wetland management, suggesting that the relationships between the activities can at times be closely connected[4]. In addition, although the intended outcomes may differ, there are some

[3] Note the comments provided by the U.S. Fish & Wildlife Service and the California Department of Fish and Wildlife were identical in substance, therefore, the comments and staff responses are combined. Each comment and response to Comment Letter 5, therefore, represents the corresponding comment and response to Comment Letter 6.

[4] See, for example, the California Department of Fish and Wildlife's land management plan for the Yolo Bypass (http://www.dfg.ca.gov/lands/mgmtplans/ybwa/docs/0-ExecutiveSummary.pdf) and the Cosumnes

similarities between managed wetlands and irrigated agriculture. The similarities include, but are not limited to, similar efforts to manage water to optimize vegetative growth in a managed wetland, similar controlled release of water from managed wetlands, and similar efforts to control undesirable vegetation[5].

5-3. Waste discharge from managed wetlands

Comment summary: The commenter states that the Tentative Order considers managed wetlands to be waste dischargers and also makes a seemingly contradictory statement that creating or enhancing wetlands can be used as mitigation. The commenter also states that no scientific evidence has been provided showing managed wetlands discharge waste or cause water quality impairments.

Response: Board staff does not agree that the statements in the Tentative Order are contradictory. Attachment C, section B.2, Mitigation Measure BIO-MM-2 addresses compensation for the permanent loss of wetlands, as required by the Clean Water Act. Mitigation is required when a management practice implemented in response to requirements of the Order results in the permanent loss of wetland habitat. Mitigation can be accomplished by purchase of credits in a locally approved mitigation bank or by implementing a wetland restoration plan. Replacing wetlands that have been removed does not imply that all desirable wetland functions are present or will automatically prevent discharges to water that may impair beneficial uses. While wetlands frequently act as sinks for pollutants received from upstream or internal sources (e.g. nutrients, pesticides, sediment), wetlands may discharge pollutants (see additional discussion below).

Although wetlands are known to filter, transform and remove pollutants, there are examples where managed wetlands are known to discharge pollutants that impair water quality. A USGS technical paper describes the existing complexity and diversity of wetland functions (Carter 1997[6]). Each wetland is unique. The environmental setting and management activities on each wetland determine its ability to act as a source or sink for materials that can affect water quality. Because wetland water management involves artificial flooding and drawdown cycles, water discharged from managed wetlands may carry high levels of decomposing organic material and nutrients, thus causing high biological oxygen demand (BOD), which can decrease dissolved oxygen (DO) to detrimental levels in receiving waters.

Board staff has reviewed various reports and studies regarding wetlands in the Central Valley and Delta regions. A report on managed wetlands in the Suisun Marsh describes the management options and tools available to meet wetland habitat goals (DFG and SRCD, no date[7]). The report notes that a potential unintended

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River Preserve discussion of agricultural activities associated with the Preserve (http://www.cosumnes.org/agriculture-on-the-preserve/). Documents accessed by web on 2/4/14.

[5] See, for example, a description of land management activities associated with managed wetlands produced by the California Department of Fish & Wildlife http://www.dfg.ca.gov/lands/waterfowl/docs/WetlandinCentralValley.pdf. Documents accessed by web on 2/7/14.

[6] Carter, V. (1997). Technical Aspects of Wetlands, Wetland Hydrology, Water Quality and Associated Functions. National Summary on Wetland Resources, United States Geological Survey Water Supply Paper 2425.

[7] California Department of Fish and Game and Suisun Resource Conservation District. (No Date). Initial Draft, Conceptual Model for Managed Wetlands in Suisun Marsh. Compiled by DFG and SRCD staff, 129 pages.

consequence of management activities is the discharge of low dissolved oxygen waters from managed wetlands. When organic material in managed wetlands decomposes, it may cause depletion of oxygen levels. Low DO events may cause fish and invertebrate mortality. One study demonstrated that BOD loads from the Grassland Watershed to the San Joaquin River were proportional to flow during June-October and that wetland and irrigated agriculture drainage both negatively impacted water quality in the watershed (Stringfellow et.al. 2008[8]). In addition, all of the Central Valley Water Board's methyl-mercury control programs in identify managed wetlands as a potential source of methyl-mercury that must be addressed[9].

These studies and reports provide sufficient evidence that discharges from managed wetlands may contain wastes that could affect the quality of waters of the state. It is appropriate for the Tentative Order to include provisions regulating discharges of waste from managed wetlands.

5-4. Existing templates and control plans don't apply to managed wetlands

Comment summary: The commenter states that inclusion of managed wetlands into the existing structure of ILRP Waste Discharge Requirements templates and control plans are hampered by this fundamental difference in land management.

Response: Staff agrees that the templates and plans proposed for irrigated agriculture operations are not applicable to managed wetlands (i.e., Farm Evaluation, Nitrogen Management Plan, Nitrogen Management Plan Summary Report, and Sediment and Erosion Control Plans). As described below, the Tentative Order allows for the preparation of appropriate templates and plans that specifically address managed wetlands.

Nitrogen Management Plan and Template: Since fertilizers are not used on managed wetlands, Nitrogen Management Plans and Nitrogen Management Plan Summary Reports do not need to be prepared for parcels operated as managed wetlands. Since Nitrogen Management Plans are not required for managed wetlands, there is no need to develop a specific Nitrogen Management Plan template for managed wetlands.

Sediment and Erosion Control Plan and Template: A sediment discharge and erosion assessment report will be prepared by the third-party and will provide information on whether managed wetland areas are potential sediment sources. If managed wetlands have the potential to discharge sediment and impair downstream water quality, the third-party group has the option to submit a wetland-specific Sediment and Erosion Control Plan Template within 60 days of Executive Officer approval of the Sediment Discharge and Erosion Assessment Report. The Sediment and Erosion Control Plan would need to be prepared for those managed wetland areas that are identified as potential sediment sources.

Farm Evaluation Plan Template: The Order allows the third-party entity to propose a "managed wetlands" evaluation template within 60 days of receiving an NOA, which evaluates management practices associated with managed wetlands that could affect

[8] Stringfellow WT, Hanlon JS, Borglin SE, Quinn NWT. (2008). Comparison of wetland and agriculture drainage as sources of biochemical oxygen demand to the San Joaquin River, California. Agricultural Water Management 95: 527-538.

[9] See the Water Quality Control Plan for the Sacramento River and San Joaquin River Basins.

the quality of surface water or groundwater. Staff believes that the flexibility provided in the tentative Order, which allows the third-party to develop a managed wetlands template in coordination with wetland managers, provides the best means for addressing the unique management activities conducted on managed wetlands and the potential impact of any of those activities on water quality.

5-5. Funding availability

Comment summary: Limited funding available to state and federal managed wetlands would best be utilized to address overall water quality goals and objectives as they apply to operation and management of these unique properties.

Response: Porter-Cologne applies to all potential dischargers of waste, including federal and state agencies with managed wetlands. The proposed Order is an option available to obtain necessary regulatory coverage. Wetland owners/operators may obtain regulatory coverage through other means. Should the commenter or any other wetland manager wish to pursue an alternative method of complying with Porter-Cologne (e.g., individual WDRS or a WDR specific to managed wetlands), staff will work with those wetland managers to further explore those alternatives.

Board staff has made adjustments to the proposed Order that should reduce potential costs to managed wetland owner/operators. Board staff has also included additional references in the Information Sheet regarding the potential impacts of managed wetlands on water quality.

5-6. Further discussion needed

Comment summary: The commenter notes that wetland managers have previously provided comments voicing their concerns and participated in public processes related to development of the long-term ILRP. The commenter recommends further discussion between wetland managers and the Water Board to address a way forward that recognizes managed wetland functions and values within context of overall water quality goals.

Response: Board staff welcomes the opportunity for further discussion with wetland managers to develop a path forward that meets the regulatory mandates and goals for both managed wetlands and water quality. Staff is currently working with wetland managers to hold such meetings.

Comment Letter 7- Cosumnes River Preserve

7-1. Concerns previously raised

Comment summary: The commenter notes that wetland managers have previously met with Board staff to discuss concerns and provide input into the draft WDR. They have also provided oral comments in public meetings, re-emphasizing their concerns and their request to exclude managed wetlands from the irrigated agricultural lands regulations.

Response: See responses to Comments 5-5 and 5-6.

7-2. Exclude managed wetlands from the WDRs

Comment summary: Wetlands are excellent systems for reducing nitrates, phosphorus, pesticides, sediments, and other would-be contaminants of surface and ground water and, as such, they should be excluded from the WDR[10].

Response: See response to Comment 5-3. It is important to note that owners/operators of managed wetlands are not compelled to obtain regulatory coverage under the Tentative Order. Joining an approved third-party or continuing to be a Member thereof may provide the most cost-effective way of obtaining regulatory coverage for discharges of waste from managed wetlands that could affect the quality of waters of the state. Regulatory coverage for those discharges is required by the Porter-Cologne Water Quality Control Act.

7-3. Value of managed wetlands

Comment summary: There is no evidence provided that shows that managed wetlands are waste dischargers. Most wetlands hold irrigation water for extended periods, reducing the risk of sediment discharge.

Response: See response to Comment 5-3 regarding potential water quality issues related to managed wetlands. Board staff agrees that the wetland will generally act as a sedimentation basin and not contribute to excess sediment. However, wetland drainage channels, access roads, or stream crossings may contribute to discharge of excess sediment. In addition, managed wetland activities such as plowing, disking, and mowing are performed for weed and vegetation management. Such activities may create conditions where soils are vulnerable to erosion. Sediment may be discharged during periods of water movement from the disturbed wetlands to drainage channels and other receiving waters.

7-4. Wetlands as mitigation

Comment summary: Attachment D, Section D.4 describes mitigation measures for the loss of wetlands, including purchasing credits from a mitigation bank or creating or enhancing the affected wetland type. This appears to contradict the designation of managed wetlands as potential dischargers.

Response: See response to Comment 5-3.

[10] Note that the commenter has cited a number of publications, which the commenter indicates supports its contention regarding the water quality benefits of wetlands. Staff has not reviewed each publication to assess the applicability of the results to managed wetlands covered by the Tentative Order. Staff concurs that managed wetlands can provide water quality benefits.

Comment Letter 8- Sacramento River Source Water Protection Program

8-1. Applicable water quality criteria

Comment summary: The commenter understands that MRP Table 5 is not meant to be a comprehensive list of all the water quality objectives applicable to constituents discharged by agricultural operations, but recommends that a sentence be added to state that there are other constituents with numeric water quality objectives that could be present in the discharge and that those objectives apply as well.

Response: Board staff believes they have included in MRP Table 5 all constituents with Basin Plan numeric water quality objectives that are or may currently be discharged by agricultural operations. A footnote has been added to clarify this intent of Table 5 in the MRP, and that does not foreclose the possibility that new information or practices may reveal additional constituents discharged by agricultural operations.

Comment Letter 9 – California Sportfishing Protection Alliance and California Water Impact Network

This response to comments includes as an attachment a separate response to attachments contained within comment letter 9. This separate response was necessary because Board staff was unable to determine whether the CSPA attachments were provided to support the contentions in CSPA's comment letter or whether CSPA intended for the board to consider additional comments in the attachments that were not reflected in the CSPA letter.

9-1. Regional [Surface Water] Monitoring Inadequate

Comment summary: Regional [surface water] monitoring cannot provide a sound basis for curtailing and preventing pollution from farms. Data collected so far proves "folly" of relying exclusively at not looking at individual discharges. Downstream monitoring stations cannot and do not measure water quality occurring miles upstream.

Response: See response to comment 9-14.

9-2. Staff watered down program based on unreasonable fears

Comment summary: Staff has watered down the program based on fears that they don't want to air the dischargers' "dirty laundry" or in response to a fear of being sued by third-parties.

Response: The tentative Order has been designed based on a reasoned consideration of applicable laws and policies, along with board direction regarding this Order and the irrigated lands regulatory program in general. The characterization of the basis of the program is inaccurate and without foundation. The tentative Order does not include any discussion related to not airing "dirty laundry" or concerns about lawsuits from third-parties.

9-3. Staff have failed to demonstrate that farm-specific monitoring and more direct control over dischargers involve unreasonable costs

Comment summary: Staff "hides behind a rhetoric of poverty". The farms in the permit area generate billions of dollars in profits. Staff has "failed to articulate any evidence demonstrating that farm specific monitoring and more direct control over the west-side dischargers involve unreasonable costs."

Response: Staff has relied on the cost and economic analysis conducted as part of the Program Environmental Impact Report, with some minor modifications (e.g., change in fees), to evaluate the costs and potential economic impact of the proposed Order. The analysis included estimates of the change in the value of production; change in net revenue; and change in irrigated acreage from existing conditions for the five programmatic alternatives analyzed in three basins – the Sacramento River Basin; the San Joaquin River Basin; and the Tulare Lake Basin. That analysis showed that the costs associated with universal farm-specific monitoring and direct oversight by the Central Valley Water Board (Alternative 5) had the most significant negative impact in terms of reductions in value of production; net revenue; and irrigated acreage compared to all other alternatives (Alternatives 1-4), including the third-party led alternatives.

Using the results from the Economics Report (Table 2-22) for the Sacramento River basin and San Joaquin River basin, the projected cost of Alternative 5 (similar to the Commenter's farm specific approach) is an average of $192.77 per acre per year, with a projected $53.41 per acre annual cost for monitoring and $8.73 per acre for administration (primarily board staff costs). The estimated average cost of this Order is $105.65 per acre annually with an estimated average annual cost of $4.91 per acre for monitoring. For the approximately 1,777,000 acres in the Order area, the additional $87.13 per acre average annual cost for an individual monitoring/direct regulatory oversight approach would increase costs for the whole watershed by approximately $155 million per year, or an over 80 percent higher estimated annual cost.

The costs associated with Alternative 5 would result in a projected loss of 212,000[11] acres of irrigated lands, as compared to the estimated loss associated with this Order of approximately 124,000 acres (see Attachment D, page 17). The Economics Report and PEIR also include estimates of the state staffing levels approximately eighteen times higher to manage thousands of dischargers directly versus working with a third-party group.[12]

The additional costs and potential additional loss of Important Farmland associated with direct, individual regulation can be avoided should growers be able to successfully protect water quality under the proposed third-party administered Order. The successful monitoring, reporting, and outreach efforts by the Coalition and the improvements in water quality under the Coalition Group waiver suggest that providing a less costly alternative for a grower to comply with Porter-Cologne is reasonable, appropriate, and has a strong likelihood of success.

The characterization of a "rhetoric of poverty" is inaccurate and without foundation. Staff has not provided any discussion regarding income levels of farmers relative to poverty levels as a basis for any of the requirements in the tentative Order.

The Commenter suggests that staff is obligated to demonstrate that farm specific monitoring and more direct control involve unreasonable costs. Staff is not aware of any legal requirement to select the most costly regulatory option, unless it can be shown that those costs are unreasonable.

The tentative Order represents a less costly approach (as compared to Commenter's suggested approach) for achieving the board's policy goals and meeting its legal obligations. However, the tentative Order includes numerous provisions for additional field specific monitoring and reporting of individual grower information, if the third-party and their Members are not successfully protecting water quality (e.g., inadequate progress in implementation of a surface water quality management plan can field studies; on-site verification of practices; or revocation of coverage under the tentative Order).

[11] Staff calculated the potential loss of agricultural land for the commenter's proposed approach (similar to Alternative 5) from Table 5.10-6, Volume I of the draft PEIR based on the ratio of irrigated lands covered by the tentative Order to the total irrigated lands in the Sacramento River and San Joaquin River Basins (this is the same methodology as described in Attachment D, pages 16 and 17 for calculating potential loss of Important Farmland under the tentative Order).

[12] From Table 2-16 of the Economics Report comparing Alternatives 2 and 5.

In addition, the board has already adopted a general WDR to regulate growers individually, along the lines of the approach the Commenter has suggested. This more costly regulatory approach is available to be applied immediately to individual dischargers or areas, if dischargers under the third-party based tentative Order are not meeting the Order's requirements.

9-4. Evidence not sufficient for findings supporting authorization of degradation
Comment summary: There is not sufficient evidence to support authorizing degradation of every surface and groundwater throughout the WDR area.

Response: The rationale for allowing degradation of high quality waters as proposed in the tentative Order is justified and well described in the findings and Information Sheet. Additional discussion of the support for findings related to degradation can be found in subsequent responses to the commenter's more specific comments presented below.

9-5. As Proposed, The Order Would Not Waive Filing of Reports of Waste Discharge By All Dischargers Within the WDR Area.
Comment summary: The exclusive means for avoiding the requirement for a discharger to file a Report of Waste Discharge is to issue conditional waiver pursuant to Water Code section 13269. Unless the Central Valley Water Board proposes to adopt a conditional waiver pursuant to Water Code section 13269, the Board must require each discharger covered under the Order to file a Report of Waste Discharge.

Response: Board staff disagrees with the commenter's interpretation of Porter-Cologne. While staff agrees that the Board would be authorized to waive the requirement to file a report of waste discharge if it issued a conditional waiver pursuant to Water Code section 13269 (as it has done historically since 2003), the plain language of the Porter-Cologne provides separate authorization for the Board to issue waste discharge requirements to dischargers in the absence of receiving a report of waste discharge from the discharger.

As acknowledged by the commenter, Water Code section 13263(d) reads, "the regional board may prescribe [waste discharge] requirements although no discharge report has been filed." The plain language of this provision means that the Board is explicitly authorized to issue waste discharge requirements where, as here, it has not received reports of waste discharge from the growers regulated by the general waste discharge requirements. General waste discharge requirements are authorized pursuant to Water Code section 13263(i). The separate authorizations for issuing conditional waivers or general waste discharge requirements in the absence of reports of waste discharge are located in different sections of the Water Code. The placement of each explicit authorization in different locations of the Code is not significant, and does not support the commenter's argument that the regulating these discharges in the absence of reports of waste discharge is exclusively reserved to conditional waivers. In fact, this Board, the State Water Board, and other Regionals Boards throughout the state have, as a matter of practice, issued general waste discharge requirements that authorize discharges without requiring reports of waste discharge to be submitted in compliance with Water Code section 13260.

The commenter tries to assign significance to Water Code section 13264 as signaling that reports of waste discharge are required for General WDRs but not for conditional waivers. That section, which applies to the initiation of a new or materially changed

discharge, does not appear to apply to the discharges to be regulated by the tentative Order, which have been ongoing for several decades and have previously been regulated under a conditional waiver.

9-6. The Regional Board Has No Authority To Deputize Third-Parties To Hold Section 13267 Reports For The Regional Board And Insulate The Reports From Public Disclosure.

Comment summary: The farm evaluations report must be provided directly to the board, and not to a deputized third-party. Requiring a report to be submitted to a third-party violates the requirement that reports prepared pursuant to Water Code section 13267 be submitted directly to the Regional Board.

Response: Board staff disagrees that the tentative Order's requirement for Members to prepare farm evaluation reports, have them available for regional board review upon request, and to have them submitted to their third party representative violates the Water Code. Requiring dischargers to keep records and make them available to the Board upon request has been common practice among State Water Board and the regional boards for decades and does not violate Porter-Cologne. In fact, Water Code section 13383 (applicable to NPDES permits), explicitly authorizes the regional boards to "establish monitoring, inspection, entry, reporting, *and recordkeeping requirements*." (italics added).

The commenter asserts that the language of Water Code section 13267(b)(1) requiring a discharger to "furnish, under penalty of perjury, technical or monitoring reports which the regional board requires" eliminates the Board's discretion to impose recordkeeping requirements, and instead require all reports to be submitted directly to the Board. Board staff disagrees, and has a different interpretation of the cited language. The tentative Order requires members to prepare the report, which "shall be maintained at the Member's farming operations headquarters or primary place of business, and must be produced upon request by Central Valley Water Board staff." The proposed requirement is therefore authorized by Water Code section 13267, as it requires the member to furnish the report in the manner "which the regional board requires" (i.e. maintained at the business, and be available for production upon Board request). The tentative Order imposes a recordkeeping requirement, and those records must be furnished upon request. The commenter's interpretation would result in the absurd result that recordkeeping requirements are authorized by Porter-Cologne for Board's NPDES program, but are prohibited by the other sections of the Porter-Cologne Act.

In addition to staff's position that the recordkeeping requirements are authorized by Porter-Cologne, it also asserts that it is appropriate to require these reports to be submitted to the third-party in addition to being available upon request. Since 2003, the Board has used a coalition approach to regulating discharges from irrigated agriculture. This approach was reviewed by the State Water Board in 2004, and was allowed to remain in place. (State Water Board Order 2004-0003). The requirement to submit farm evaluation reports reflects the advancement of the program to require members to submit more detailed information to its third-party representative. It is appropriate that the third-party representative receive and review the information contained within each members' farm evaluation report. The additional requirement to submit the report to the third-party representative in no way supersedes or eliminates each member's obligation to maintain the report at its business, or to produce the report upon request from the Board. If the Board staff receives a copy of the report, it would be subject to public disclosure under the California Public Records Act.

9-7. If the Regional Board Makes the Findings Under the High Quality Waters Policy to Allow Degradation in Both Surface and Ground Waters Throughout The 1,777,000 Acre WDR Area, the Regional Board Will Have Abused Its Discretion and Proceeded in a Manner Inconsistent With the Law.

Comment summary: As detailed below in the letter, the tentative Order violates the State's Antidegradation Policy.

Response: This is a general introductory comment introducing more detailed comments that follow. In response, Board staff maintains that the tentative Order fully complies with the State Antidegradation Policy. The responses to the detailed comments are provided below.

9-8. The Regional Board Cannot Allow Degradation Under the High Quality Waters Policy Prior to Identifying the High Priority [sic, High Quality] Waters in the WDRs' Geographic Area.

Comment summary: Neither board nor staff have reviewed the available data and determined which waterbodies are high quality waters. Because board does not know which waters are high quality waters, the board lacks the information necessary to apply the antidegradation policy balancing test. The board must first identify which of the waters in the order area are high quality waters; there should be a search of the data to determine the best water quality for every segment in the watershed.

Response: Nothing in the State Antidegradation Policy itself, its guidance documents, or published appellate decisions indicates that the regional board must determine the best quality of the receiving waters that have existed since 1968, and from that compile an inventory of all high quality waters within the permit area for all constituents of concern. The commenter cites Asociacion de Gente Unide por el Agua v. Central Valley Water Board [*AGUA*] (2012) 210 Cal.App.4th 1255, 1271 in support of its position. However, that court decision did not specifically require the Central Valley Water Board to conduct an inventory of high quality waters. Nor did the court prepare an inventory itself. Instead, the court assumed that the State Antidegradation Policy applied throughout the region for nitrate based on its finding that "at least some of the water affected by the Order is high quality water." This is essentially the same approach taken by the tentative Order, which proposes to apply BPTC and "best efforts" equally to high quality waters and already degraded waters.

Appendix A to the PEIR and the tentative Order's Information Sheet (Attachment A) describe in detail the Central Valley Water Board's approach to compliance with the Anti-Degradation Policy. As mentioned in the PEIR, very little guidance has been provided by the State Water Board with respect to applying the State Antidegradation Policy to a general permit where multiple water bodies are affected by various discharges, some of which may be high quality waters and some of which may have constituents at levels have exceeded water quality objectives at all times since 1968. In the context of the tentative Order, which aims to regulate discharges to a very large number of water bodies, each with numerous constituents, making comprehensive determinations as to water quality is a near impossible task. There is no comprehensive, waste constituent-specific information for all receiving water bodies in the permit area. As a result, the Central Valley Water Board did not prepare an inventory of all 'high quality receiving waters' within the permit area. Although the commenter claims such an exercise is legally required, they do not provide any

discussion, reference, or State Board or Regional Board guidance supporting their claim, other than the *AGUA* case discussed above.

9-9. Staff's Proposal Would Have the Regional Board Determine That Degradation is Authorized Even for Parameters and Waterbody Reaches That, Although High Quality, Discharges are Not Currently Degrading

Comment summary: The comment alleges that the tentative Order proposes a blanket authorization for farms in the WDR area to degrade waters even for pollutants at the monitoring locations that they cannot show any reason degradation is necessary for the public benefit or any other reason. The commenter asserts that the tentative Order would authorize degradation even where there is no discernable discharge degrading high quality waters.

Response: The commenter asserts the tentative Order, including its receiving water limitations, provides a "blanket authorization" for degradation. The Central Valley Water Board disagrees that the tentative Order authorizes a "blanket" amount of degradation of high quality waters. That assertion misreads the tentative Order by viewing in isolation the Receiving Water Limitations (which prohibit discharges that cause or contribute to exceedances of water quality objectives) to the exclusion of all other waste discharge requirements contained in the tentative Order.

To the contrary, and as described below, the tentative Order, when viewed as a whole, establishes requirements that will limit degradation of high quality waters (where applicable) through the implementation of BPTC by all covered dischargers (e.g., through farm management performance standards, nitrogen planning, farm planning, and feedback monitoring). The receiving water limitations provide additional restrictions that overlay the other requirements. This provides a regulatory ceiling that prohibits all discharges, including discharges to waters that are not high quality, from causing or contributing to exceedances of water quality objectives.

While the receiving water limitations establish a ceiling for degradation, the tentative Order's farm management performance standards, and management practice implementation requirements will limit and reduce the waste discharges that may result in the degradation of high quality waters. Farm management performance standards (listed in the Information Sheet) and other requirements of the tentative Order provide additional requirements that will further limit degradation. For example, the performance standards require all members to implement practices to minimize waste discharge to surface water even where a discharge is currently meeting water quality objectives. In other words, there is no exemption from this performance standard for members that are in compliance with the tentative Order's receiving water limitations. As another example, the nutrient performance standard requires minimization of nutrient application relative to crop consumption regardless of the concentrations of nutrients in the receiving groundwater. Therefore, where underlying groundwater is of high quality for nutrients, the tentative Order requires minimization of nutrient application relative to crop consumption, which will minimize waste discharge to groundwater and surface water and any associated potential degradation through the implementation of best practicable treatment or control. This minimization requirement is in stark contrast with the commenter's assertion that the tentative Order provides a "blanket authorization" for the degradation of high quality waters. Other examples of farm management performance standards or related prohibitions include minimization of sediment discharges and percolation of waste to groundwater, the protection of

wellheads from surface water intrusion, and prohibitions against discharging waste into groundwater through backflow or groundwater well casings.

With respect to the commenter's implication that more stringent requirements should apply in situations where there is "no discernable discharge degrading water," Board staff disagrees. As noted in the tentative Information Sheet, "Resolution 68-16 does not require Members to use technology that is better than necessary to prevent degradation. As such, the board presumes that the performance standards required by this Order are sufficiently achieving BPTC where water quality conditions and management practice implementation are already preventing degradation. Further, since BPTC determinations are informed by the consideration of costs, it is important that discharges in these areas not be subject to the more stringent and expensive requirements associated with SQMPs/GQMPs. Therefore, though Members in 'low vulnerability' areas must still meet the farm management performance standards described above, they do not need to incur additional costs associated with SQMPs/GQMPs where there is no evidence of their contributing to degradation of high quality waters. The tentative Order triggers requirements for additional management practices (through management plan requirements) when trends of degradation that threaten beneficial uses are detected. This is the appropriate trigger and avoids requiring technology better than necessary to prevent degradation.

9-10. <u>The Regional Board Does Not Have Sufficient Evidence to Establish that Any Given Discharger's Degradation of Surface and Ground Waters Throughout the WDR Area Will Maximize Benefits to the People of California.</u>

Comment summary: The commenter asserts that the board's analysis of whether the degradation of high quality waters authorized by the Order is in the maximum benefit to the people of the state must be quantitative and specific to each particular discharger. The Board is not in an evidentiary position to apply the factors relevant to maximum public benefit and to declare any degradation acceptable under the Antidegradation Policy. A region-wide basis for economic analysis does not provide any evidence relevant to whether authorizing a discharge from any particular farm in the order area will be consistent with the maximum benefit to the people of California. Monitoring will not be able to discern water quality changes upstream and as such cannot be used to make a finding that any such changes will be of maximum benefit to the people of California.

Response: As documented in the Information Sheet, Board staff has conducted an analysis of whether the potential degradation of high quality waters authorized by the tentative Order is consistent with the maximum benefit to the people of California. The analysis is qualitative. The commenter asserts that the board's analysis must be quantitative and specific to each particular discharger. The suggested approach is infeasible for a general order that authorized by Water Code section 13263(i) and is set to regulate thousands of individual dischargers.

Because of the widespread nature of irrigated agriculture and the numerous water bodies potentially affected, it is infeasible for the board to quantitatively review each potential waste discharge and receiving water scenario (tens of thousands) throughout the Central Valley, quantify its potential degradation of high quality waters, and determine whether that quantified degradation is consistent with the maximum benefit to the people of California. Instead, board staff conservatively assumed that there are high quality waters receiving irrigated agricultural wastes that may be degraded by continued discharge. Operating under this supposition, the tentative Order applies

requirements to minimize such degradation not just for those operations discharging to a high quality water, but all operations; requirements to implement best practicable treatment or control or "best efforts"; and requirements to ensure that waste discharge is not above an applicable water quality objective.

Despite the quantitative limitations inherent to general orders, Board staff has proceeded to propose a "maximum benefit" determination in consideration of factors listed in State Water Board guidance documents. As described in the tentative Order and its attachments, board staff has considered (1) past, present, and probable beneficial uses of the water (specified in Water Quality Control Plans); (2) economic and social costs, tangible and intangible, of the proposed discharge compared to the benefits, (3) environmental aspects of the proposed discharge; and (4) the implementation of feasible alternative treatment or control methods, which are the factors listed in the State Water Board's 1995 Question and Answers document recommended for consideration in determining the "maximum benefit to the people of the state." That guidance document acknowledges that the determination is "based on considerations of reasonableness." The commenter's suggestion that the analysis must be made on a discharger-by-discharger basis is not reasonable for a general order regulating thousands of dischargers. Staff's qualitative analysis of compliance with the State Antidegradation Policy is reasonable under the circumstances.

9-11. <u>The Regional Board Cannot Authorize Degradation of all Waters Within the WDR Area Because the Proposed WDR Conditions, Even if Complied With, Will Only Further Demonstrate That the Authorized Discharges will Result in Water Quality Less Than the Basin Plan's Water Quality Objectives.</u>

Comment summary: The tentative Order will not ensure compliance with applicable water quality objectives as evidenced by the tentative Order's proposed ten-year compliance schedule. Furthermore, the monitoring scheme is not sufficient to detect violations of water quality objectives for large expanses of the watersheds upstream of the monitoring stations.

Response: The tentative Order proposes a finding that the discharges to high quality waters authorized by the tentative Order comply with the State Antidegradation Policy. Specifically, the Information Sheet reads: "The receiving water limitations in section III of the Order, the compliance schedules in section XII, and the Monitoring and Reporting Program's requirements to track compliance with the Order, are designed to ensure that the authorized degradation will not cause or contribute to exceedances of water quality objectives, unreasonably affect beneficial uses, or cause a condition of pollution or nuisance." This statement is fully supported by evidence in the record.

The receiving water limitations in the tentative Order, combined with the time schedule provisions, are intended to bring a Discharger into compliance with water quality objectives as quickly as possible once violations are detected. This process, along with the performance standards and other requirements of the tentative Order, will ensure that all Dischargers reduce their waste discharges in the short-term, while fully complying with water quality objectives in the long-term.

Antidegradation requirements do not require instantaneous compliance or otherwise provide time limitations on achieving policy objectives; i.e., to ensure that best practicable treatment or control is in place and that degradation is not allowed above applicable water quality objectives. The Water Code, however, clearly provides the board with the discretion to prescribe time schedules within waste discharge

requirements [section 13263(c)]. Further, the State Board's regulations encourage time schedules in situations like these where it appears that not all growers covered by the tentative Order can immediately meet the tentative Order's receiving water limitations.[13] Using time schedules to implement antidegradation requirements was explicitly recognized and endorsed by the California Court of Appeal, who wrote with respect to the Central Valley Water Board's Dairy Waste Discharge Requirements that "[a] phased approach… is reasonable, and is authorized by section 13263, which allows the requirements of a regional water quality control board to contain a time schedule." *AGUA v. Central Valley Water Board*, 210 Cal.App.4th 1255, 1277.

The diffuse nature of nonpoint source pollution may not allow the board or dischargers to immediately determine the practices causing or contributing to the exceedance of objectives, nor to determine the most effective and practicable remedies. Therefore, the compliance time schedules provide up to 10 years for the determination of which practices are protective and a process for establishing timelines to implement those practices (through Groundwater Management Plans, Surface Water Quality Management Plans, or the Management Practices Evaluation Program). However, the 10-year timeframe is a maximum and does not default to 10 years. Instead, the tentative Order would require the discharger to propose a schedule that is as short as practicable with appropriate technical and economic justification. It would be unreasonable to require immediate compliance prior to generating the information needed to understand how to address the problem and providing time to implement the corrective actions.

The Board's monitoring and reporting system is representative and is designed to detect whether members are causing or contributing to exceedances of water quality standards. For a discussion of the adequacy of the representative monitoring approach, see response to comment 9-14.

9-12. <u>The Regional Board Does Not Have Sufficient Evidence to Establish that All Dischargers Within the WDR Area are Implementing the Best Practical Treatment Controls for Discharges to Surface Waters and Ground Water.</u>
Comment summary: Without requiring information about what each individual discharger is implementing for management practices and data regarding the practices' effectiveness to control pollutants, there is no evidence upon which the Board can base a finding that each discharger will implement BPTC.

Response: As required by the Antidegradation Policy when authorizing degradation of high quality waters, the Tentative Order proposes a finding that the Order will result in the implementation of BPTC. This proposed finding is appropriate and supported by evidence in the record. The commenter has not shown otherwise.

The Information Sheet (under the heading "Consistency with BPTC and the 'Best Efforts' Approach") goes into great detail explaining the proposed finding that the tentative Order will result in the implementation of BPTC where applicable.

BPTC is not defined in Resolution 68-16. However, the State Water Board has provided guidance in its 1995 Question and Answers document on the numerous factors the Boards may consider in determining BPTC: "To evaluate [BPTC], the discharger should compare the proposed method to existing proven technology;

[13] See 23 Cal.Code.Regs., section 2231, subd.(a).

evaluate performance data, e.g., through treatability studies; compare alternative methods of treatment or control; *and/or* consider the method currently used by the discharger or similarly situated dischargers." The costs of the treatment or control "should also be considered." Board staff considered each factor to the extent applicable in determining that the tentative Order will result in the implementation of BPTC.

In the Information Sheet, the staff explained the multi-step approach it took in determining that the tentative Order will result in the implementation of BPTC. The first step in the approach was to analyze the minimum performance standards and other requirements that all Members enrolled under the under must meet. First in comparing the tentative Order's proposed performance standards with published federal and state management measures for irrigated agriculture, the Information Sheet reflects consideration of "existing proven technology," "methods currently used by similarly situated dischargers," and of "promulgated technologies," three factors recommended by the State Water Board guidance for the determination of BPTC.

As described in the Information Sheet, the second step of staff's BPTC analysis considered the General Order's iterative requirements for implementation, planning, studies, and reporting. This iterative aspect of the Order results in additional planning and implementation measures in areas where water quality problems are observed. For example, the Order requires development of water quality management plans (surface or groundwater) that must be implemented by growers where irrigated agriculture is causing or contributing to exceedances of water quality objectives or where degradation trends are observed that threaten to impair a beneficial use. The management plans include requirements to investigate sources, develop strategies to implement practices to ensure waste discharges are protecting water quality, and develop a monitoring strategy to provide feedback on the effectiveness of the management plan. Under these plans, additional practices will be implemented in an iterative manner, following the results of the studies and investigations required for management plans. This mechanism further supports the Board's finding that BPTC will be implemented, as these requirements will facilitate the collection of information necessary to demonstrate the performance of the practices. Furthermore, the management plans will facilitate the "evaluation of performance data" as suggested by State Water Board guidance in the determination of BPTC. The Management Practices Evaluation Program (MPEP) required by the General Order in groundwater areas defined as "high vulnerability" requires a similar set of additional requirements that will be implemented based on the evaluation of performance data.

Finally, the Information Sheet describes the tentative Order's overall costs and its impacts to the agricultural economy prior to its adoption. Consideration of costs is one of the factors listed in State Water Board guidance for determination of BPTC. Staff's consideration of costs and economics – as suggested by State Board guidance - was integrated throughout its analysis of the tentative Order, and further support the proposed determination that the practices and actions required by the Order constitute BPTC.

The robust monitoring and reporting requirements of the tentative Order, combined with the Board's enforcement tools, provide further assurance to the board that BPTC will be implemented by growers. In addition to the representative surface water monitoring, the tentative Order contains requirements for the growers to produce reports to demonstrate how they are meeting the farm management performance

standards (Farm Evaluations; Nitrogen Management Plans; Nitrogen Management Plan Summary Reports and Sediment Discharge and Erosion Control Plans). The third-party will produce evaluations of management practices and conduct additional monitoring or studies as part of the management plan process. The third-party will also assess areas vulnerable to sediment discharge and erosion. In addition, board staff has in the past and will continue to conduct inspections of individual growers to evaluate compliance with the proposed Order. The board will, therefore, have a great deal of information available to it (in addition to the results from the representative surface water monitoring efforts) to evaluate individual grower compliance. These factors provide further evidence supporting the finding that the tentative Order will result in the implementation of BPTC where applicable.

9-13. The Proposal to Authorize Degradation Admits That Implementation of the Proposed WDRs Will Continue to Degrade Water.

Comment summary: The proposed Order abandons any effort to avoid degradation of high quality waters and therefore violates the State Antidegradation Policy. Also, the proposed Order violates the State Antidegradation Policy because requirements are not geared to address degradation but exceedances of water quality objectives. Finally, the proposed Order inappropriately allows the Executive Officer to relieve the third party of management plan requirements if members meet applicable water quality objectives or if management plans will not likely remedy the exceedance.

Response: As discussed in various responses above, Board staff maintains that its antidegradation analysis fully complies with the State Antidegradation Policy. That degradation may occur under the tentative Order is not determinative. Board staff agrees that degradation of high quality waters may occur. The tentative Order authorizes such potential degradation under the terms and conditions of the Order. The potential degradation of high quality waters authorized by the tentative Order fully complies with the State Antidegradation Policy.

The commenter asserts that the tentative Order's requirements are not geared towards addressing degradation but exceedances of water quality objectives. Staff disagrees. As described in detail in response to comment 9-9, the tentative Order will limit degradation of high quality waters (where applicable) through the implementation of BPTC by all covered dischargers (e.g., through farm management performance standards, nitrogen planning, farm planning, and feedback monitoring). The receiving water limitations provide additional restrictions by prohibiting all discharges, including discharges to waters that are not high quality, from causing or contributing to exceedances of water quality objectives.

In addition to the requirements that will apply universally to limit degradation of high quality waters, the tentative Order requires the third party to prepare management plans (groundwater or surface water) whenever "irrigated agriculture is causing or contributing to a trend of degradation of surface water that may threaten applicable Basin Plan beneficial uses." Management plans can therefore be triggered even in the absence of exceedances of water quality objectives, and will further limit degradation when trends that threaten beneficial uses are identified. As described in response to comment 9-9, however, additional practices are not required by the antidegradation policy when the existing practices and water quality practices are preventing degradation.

Finally, the tentative Order includes specific provisions that should alleviate the commenter's concern that the Executive Officer may relieve the third party of management plan requirements under specific conditions. First, contrary to the commenter's assertion, the tentative Order does not include a provision allowing the Executive Officer to determine that a management plan is not required if management plans will not likely remedy the exceedance. Next, the tentative Order already addresses the commenter's concern that management plans may not be required in areas where trends of degradation exist but are not causing or contributing to water quality exceedances. The tentative Order explains how management plans will be required as long as the problem that triggered the management plan requirement has not been resolved. Those provisions preserve the Executive Officer's ability to determine that a management plan triggered by exceedances of water quality objectives is not required if irrigated agriculture does not cause or contribute to exceedances of water quality objectives. Management plan requirements would no longer be appropriate in a situation where evidence shows that irrigated agriculture is not causing or contributing to a water quality problem.

9-14. Monitoring Surface or Ground Waters Many Miles Downstream of Pollution Sources Will Neither Detect Nor Prevent Degradation or Upstream Exceedances of Water Quality Objectives.

Comment summary: Monitoring stations in the tentative order are the same as under the conditional waiver, and those stations cannot and will not detect violations of WQO or degradation beyond a short distance upstream. Upstream violations and degradation will go undetected, which is not in compliance with the antidegradation policy.

Response: [14] The commenter has incorrectly represented the surface water monitoring program; has applied conclusions and statements made on the Conditional Waiver and Dairy Order that are inapplicable to the specific facts related to this Order; and has failed to consider all information that will be available to the board to evaluate compliance and all requirements imposed on the growers to prevent unauthorized degradation and exceedances of water quality objectives.

Contrary to the commenter's assertion, the representative monitoring program is not meant to ensure that one site exactly duplicates another site. Board staff has never asserted one monitoring station "measures" water quality at another location, nor does the tentative Order rely on one monitoring station measuring water quality at another location. The monitoring program is designed to include a sufficient number of sites, parameters, and frequency of monitoring to be able to identify water quality problems and be representative of the effect of irrigated lands discharges on receiving waters. The monitoring program was developed in consideration of "critical questions" developed by the previous conditional waiver.[15]

[14] Note that the comment heading refers to groundwater, however, the commenter presents no argument or discussion related to the requirements of the groundwater program. Therefore, the staff response does not include a discussion of the groundwater program.

[15] Tentative Order, Attachment B, Section III. Those critical questions are: (1) Are receiving waters to which irrigated lands discharge meeting applicable water quality objectives and Basin Plan provisions? (2) Are irrigated agricultural operations causing or contributing to identified water quality problems? If so, what are the specific factors or practices causing or contributing to the identified problems? (3) Are water quality conditions changing over time (e.g., degrading or improving as new management practices are implemented)? (4) Are irrigated agricultural operations of Members in compliance with the provisions of the Order? (5) Are implemented management practices effective in meeting applicable receiving water

The commenter has not considered that the land use around most monitored sites is primarily, if not exclusively, agriculture. In cases where the monitoring location is not surrounded by agriculture, due to the low cropping intensity or difficult terrain, monitoring is conducted at the first available access point downstream from agricultural production areas. The land use immediately upstream of the monitored sites is agriculture and the mix of crops around the monitored sites is similar to the crop mix in unmonitored areas, subject to the same water quality risks resulting from similar agricultural production practices. Therefore, it is reasonable to use the results from the monitored sites to draw conclusions regarding water quality impacts in areas with similar crops and similar practices that are not being monitored. Under the tentative Order, if a water quality problem (e.g. exceedance of a water quality objective) is detected at a monitoring site, it is assumed that those same problems exist in the sites represented by the discharge. In fact, if a management plan is triggered by monitoring results at the Representative site, the remedial activities required at the Representative monitoring site are required at all areas represented by the applicable monitoring site.

As a general matter, such inductive reasoning is applied to results from all monitoring programs (both regulatory and scientific studies), since it is not possible to monitor all locations at all times for all constituents. The design of any monitoring program requires some judgment (based on a reasoned evaluation of available information) of how best to answer the questions of interest by determining what to monitor, how frequently to monitor, where to monitor, when to monitor, and the quality of the information needed. There are no hard and fast rules on monitoring program design and different technical experts can come to reasonable conclusions that differ in terms of what constitutes an appropriate monitoring design to meet certain objectives or answer certain questions.

As discussed in the Information Sheet at section VI.A, the surface water monitoring program has been carried over in part from the preceding conditional waiver, which also required creation of a representative monitoring program explicitly required to enable such determinations to be drawn. The Coalition Group was required to provide technical justification and identify which representative sites in an MRP Plan that was to be approved by the Executive Officer. This specific plan was approved by the Executive Officer as complying with all the requirements of that Monitoring and Reporting Order, which, as noted above, requires this sort of representative monitoring to be sufficient to give adequate information about water quality throughout the Coalition area[16]. Neither the commenter nor any other party has challenged this previous determination by the Executive Officer or the current MRP Order under which the Coalition is currently operating.

The tentative Order continues to explicitly require the representative monitoring program to enable such determinations to be drawn. MRP, Section III.A.1. reads, in part, “The third-party shall ensure that Representative monitoring sites are representative of all areas and all types of irrigated agricultural waste discharge within the entire third-party area. Monitoring sites shall be located to characterize water flow,

limitations? and (6) Are the applicable surface water quality management plans effective in addressing identified water quality problems?

[16] The Executive Officer subsequently issued an MRP Order - R5-2009-0875, which incorporated the monitoring sites identified as representative in the originally approved monitoring plan.

quality, and irrigated agricultural waste discharges within the entire third-party area." In this way, the program under the tentative Order is able to produce information about water quality throughout the area, without having to go to the expense of requiring monitoring at the edge of every field. If it turns out that a given representative site fails to adequately represent the effect of discharges from irrigated lands on receiving waters, the site would not meet the Order's requirements, and the monitoring plan would have to be adjusted to maintain coverage under the program.

Evidence in the record supports the efficacy of the surface water monitoring requirements proposed by the tentative Order. The representative monitoring program required by the previous waiver has already identified many of the major surface water quality problems, having triggered multiple management plans for a number of constituents. Although not universally positive, many of the general trends suggest there have been improvements in water quality. For example, there have been documented improvements in water quality (supported by documentation of management practice changes) in three monitoring sites and the associated represented areas to support the completion of pesticide management plans. There have also been changes in management practices that appear to generally correspond with the improvement in water. These results suggest that the monitoring design is robust enough to identify water quality problems and trends of water quality improvement. In light of those results, a representative monitoring approach is sufficient and the individual monitoring approach proposed by the commenter is unlikely to reveal any new issues that have not already been identified.

The commenter suggests that the board will not know which particular farms are responsible for the water quality problem. This statement, and the general argument in the comment, suggests that for a nonpoint source problem, where the pollutant sources are often diffuse and difficult to identify, the only legally or technically valid approach under the Antidegradation Policy is to track down individual sources through an intensive individualized monitoring program. Board staff disagrees, as the requirements of the Antidegradation Policy, must be harmonized with the Water Code's requirement that any monitoring required be reasonable and cost-effective. (See Wat. Code, § 13267, subd. (b)(1).)

The individualized monitoring approach was extensively studied when developing the Program EIR. Pages 94 of Appendix A, PEIR, provides the following discussion regarding individual field monitoring and regional monitoring approaches.

> *"...the waste discharge characteristics of runoff from each farm would be determined [under farm-based monitoring]. However, with this approach, it will be difficult to characterize the actual effects agricultural waste discharges are having on receiving water bodies. A good example is where a farm discharges to a large river. Farm-based monitoring would not necessarily provide enough information to tell whether the discharge is affecting the river's water quality."*

As described in the PEIR, monitoring only discharges from fields would not provide the needed information to determine the effects on receiving water bodies. This is a concern because water quality objectives do not apply to field effluent, but to receiving waters. State policy and law require that waste discharge requirements implement water quality objectives, which apply within receiving waters. To address this problem, the commenter's recommended field monitoring program may also need to sample receiving waters to determine the effects of each field's discharge on the receiving

waters ([field]+[upstream receiving water]+[downstream receiving water]). The board considered this individual monitoring program as one of the long-term ILRP alternatives –PEIR Alternative 5.

In evaluating Alternative 5, the board found that the cost of individual monitoring coupled with the increased board staffing to regulate individual Member fields in the commenter's suggested approach would impose a substantial cost on the industry and staff resources. This is significant in light of the Water Code's requirement that any monitoring required be reasonable and cost-effective. (See Wat. Code, § 13267, subd. (b)(1).) The economic analysis of the alternative revealed that the increased cost could cause widespread impacts to the industry, including loss of land in production, value of production, revenue; and decreased employment. For these reasons, the alternative was found inconsistent with ILRP Goal 3, to maintain the economic viability of agriculture.[17]

In contrast to the significantly more costly approach advocated by the commenter, the tentative Order will enable the Board to assure, as required by the Antidegradation Policy, that water quality objectives will not be exceeded and degradation will not be authorized in the absence of BPTC. This is a more reasonable approach because it focuses resources on changing practices that are contributing to the problem; track the implementation of those improved practices; evaluate the effectiveness of those practices; and track changes in water quality to determine whether the problem is being addressed. This approach harmonizes antidegradation requirements with the reasonableness requirements of the Water Code section 13267.

The reasonableness of this approach is reflected in surface water quality management plan the third-party will develop and growers are obligated to implement when a water quality problem is identified. The third-party will identify potential sources, the types of practices required to address the problem, evaluate the effectiveness of those practices, report on the practices that have been adopted, establish a specific schedule with performance goals and milestones, and report on progress in addressing the water quality problem.

As stated in the tentative Order, if inadequate progress is being made through the third-party led effort, then the Executive Officer will take additional action. Those actions may include field specific monitoring studies; on-site verification of implementation of practices; or requiring growers in the impacted area to be regulated directly by the board. The board staff believes the approach outlined in the tentative Order is reasonable, since it starts with an approach that can address the identified problem at a lower cost, but still includes a process for a more stringent regulatory regime if needed.

The commenter has introduced testimony from the Conditional Waiver proceedings, including testimony from a board staff person during the 2003 CEQA scoping meetings. Board staff believes such testimony is only tangentially related to the proposed Order. The Conditional Waiver and the proposed Order are significantly different in many respects, including many of the monitoring and reporting requirements and new obligations in the proposed Order imposed on growers and the third-party that were not included in the Conditional Waiver. For example, under the proposed Order, there are more obligations for growers to report on their practices

[17] PEIR, Appendix A, pages 127-129

(i.e., the Farm Evaluations) and document their efforts to protect water quality (e.g., Nitrogen Management Plans, Sediment Discharge and Erosion Control Plans), along with the monitoring and evaluation requirements of the third-party.[18]

In addition, the testimony on the Conditional Waiver was applicable to the Central Valley as a whole and not directed to the unique conditions of the area governed by this Order or the area specific requirements of the proposed Order. It is not at all clear that those providing testimony or written comments on the Conditional Waiver and its perceived shortcomings would reach the exact same conclusions considering the new and different requirements in the proposed Order.

The commenter also draws inappropriate parallels between the *AGUA* Court's conclusions regarding the adequacy of the groundwater monitoring program under the Dairy General Order and the surface water monitoring described in the proposed Order. The court in *AGUA* made factual findings based on uncontroverted evidence in the record before it, that monitoring of domestic and agricultural supply wells alone was not an accurate or timely way of determining whether degradation was occurring, in a case where the board assumed that no degradation would occur without conducting an antidegradation analysis. (See *AGUA, supra,* 210 Cal.App.4th at p. 1275). That program is unlike the representative monitoring required by the Tentative Order. There is substantial evidence in the record demonstrating that the Tentative Order requires monitoring from representative sites to provide a complete assessment of the conditions of waters of the State within the permit area. Surface water quality monitoring is not analogous to monitoring groundwater supply wells. The waste discharges to surface waters monitored in the Tentative Order will have a travel time from the field to the monitored site on the order of hours or days (depending on the location of the field relative to the monitoring site), whereas, monitoring results from a groundwater supply well may represent the effects of land use activities that occurred weeks, years, or decades before.

In conclusion, the proposed monitoring requirements provide the Board with the information necessary to detect exceedances of water quality objectives and unauthorized degradation of high quality waters. While this approach differs from the individualized monitoring regime advocated by the commenter, it achieves compliance with the Antidegradation Policy, while harmonizing the reasonableness requirements of the Water Code and achieving the goal of the tentative Order to protect water quality while maintaining the economic viability of agriculture.

9-15. <u>The Proposed WDRs fail to rely on the weight of the evidence that the WDRs are consistent with Key Element 1 of the NPS Policy.</u>
Comment summary: The implementation program does not demonstrate that nonpoint source pollution will be addressed in a manner that achieves and maintains water quality objectives and beneficial uses, and complies with antidegradation requirements. The board does not and will not know the specific management

[18] The monitoring and evaluation requirements of the third-party include, but are not limited to preparing: 1) a Sediment Discharge and Erosion Assessment Report; 2) a Groundwater Quality Assessment Report; 3) a Management Practices Evaluation Report; 4) semi-annual Monitoring Reports, which will include reporting and assessing water quality data and management practices; 5) Management Plan Status Reports, which include evaluation of the degree of implementation of management practices and their effectiveness.

practices implemented anywhere in the order area as farm evaluations will not include any maps. Regional water quality monitoring will not allow correlation of implemented management practices and water quality requirements, except in portions where water quality standards are violated.

Response: The key element 1 of the NPS policy is that the purpose of the program must be stated and the program must address NPS pollution in a manner that achieves and maintains water quality objectives and beneficial uses, including any applicable antidegradation requirements. As described in the Information Sheet, the program goals and objectives are stated in the ILRP Program Environmental Impact Report, Final and Draft. The requirements of this Order include requirements to meet applicable water quality objectives and the requirements of State Water Board Resolution 68-16 (antidegradation requirements) as discussed in the responses to the issues raised by the commenter regarding the antidegradation requirements.

The commenter also suggests that the Superior Court's decision regarding the Conditional Waiver's and the NPS Policy is directly applicable to the proposed Order. The parallel the commenter wishes to draw is inapplicable, since the Superior Court found the total absence of groundwater related provisions to be inconsistent with the NPS Policy. The Superior Court has not evaluated an Irrigated Lands Regulatory Program Order that includes groundwater provisions, as found in the proposed Order.

The comment also incorrectly states that the Farm Evaluation "…will not include any maps of the respective dischargers." The Farm Evaluation includes a requirement to prepare a farm map. The farm map must be produced by the Member upon request from the board. The commenter also incorrectly states that the board will not know what management practices are being implemented. Management practices being implemented will be reported by the grower to the third-party and then reported to the board. In addition, the board can demand that an individual grower produce their farm evaluation or require the third-party to provide management practice information identifiable to individual growers.

The comments regarding the representative monitoring have been addressed in the prior responses.

9-16. <u>The Proposed WDRs fail to rely on the weight of the evidence that the Proposed WDRs are consistent with Key Element 2 of the NPS Policy</u>
Comment summary: There is no evidence to suggest that the monitoring requirements can detect violations of water quality standards upstream, or evaluate the effectiveness of management practices to prevent such violations upstream of monitoring locations. There is no evidence to demonstrate the effectiveness of any management practices in the Central Valley to achieve discharges that comply with water quality standards.

Response: The commenter is referred to prior responses to the contention that the representative monitoring approach is not adequate.

The commenter incorrectly states that there is no monitoring of receiving waters adjacent to where the farms are discharging. The appendix to the MRP (MRP-3) includes maps of the various subwatersheds within the Sacramento watershed. Board staff has revised MRP-3 to include the location of the monitoring sites with the surrounding land uses. The "Representative monitoring sites are all surrounded by

agricultural land or are directly downstream from agricultural land and receive any surface water discharges from those lands.

The commenter is referred to the discussion in the Information Sheet regarding the NPS Policy and Key Element 2. Board staff believes the discussion in the Information Sheet demonstrates that the proposed Order is consistent with the NPS Policy and Key Element 2.

9-17. The Proposed WDRs fail to rely on the weight of the evidence that the Proposed WDRs are consistent with Key Element 4 of the NPS Policy.

Comment summary: There are no confirmed feedback mechanisms that will be used to verify that management practices are being properly implemented and are achieving program objectives, no mechanisms exist to detect or react to violations of WQO upstream of monitoring sites, or effort to determine what the existing water quality is and identify high quality waters. After eight years, the Coalition has produced no information describing the location of management practices actually in place, and the farm evaluations will remain sequestered in the third-party files.

Response: The feedback mechanisms required by the tentative Order are consistent with Key Element 4. To provide feedback on whether water quality goals are being achieved, the tentative Order requires surface water and groundwater quality monitoring, tracking of management practices, and evaluation of effectiveness of implemented practices. The feedback provided by the tentative Order's monitoring requirements and SQMP requirements are discussed extensively in response to comment 14-4 and are not reproduced here.

Since management plans were first implemented, the Sacramento Valley Water Quality Coalition has surveyed growers to determine agricultural practices in six of the subwatershed. While farm evaluations submitted by Members will indeed be retained by the third-party, the tentative order does require submission of summaries of management practices information reported on farm evaluations, as well as individual data records used to prepare the summaries (in a format compatible with ArcGIS, and identified to at least the township level). In addition, the board can demand that an individual grower to produce their farm evaluation or require the third-party to provide management practice information identifiable to individual growers.

The commenter is referred to the discussion in the Information Sheet regarding the NPS Policy and Key Element 4. Board staff believes the discussion in the Information Sheet demonstrates that the proposed Order is consistent with the NPS Policy and Key Element 4.

9-18. Various Plans and Reports Identified As Subject Only to Review and Approval by the Executive Director Should Be Presented to the Regional Board for Review and Approval

Comment summary: Considerable discretion is delegated to the Executive Director [sic] to review and approve third-parties and various plans, or waive requirements to prepare management plans. Plans constitute WDRs in themselves and must be reviewed and approved by the board itself.

Response: The commenter contends that the tentative Order violates Water Code section 13223 by delegating specific tasks to the Executive Officer as opposed to

having the Board approve those future tasks itself. The challenged delegations include those giving the Executive Officer authority to (1) approve third parties to serve as grower representatives [tentative Order at section VIII.A), (2) approve Sediment and Erosion Control Plans [tentative Order at section VIII.C), (3) approve Nitrogen Management Plans [tentative Order at section VIII.D), (4) approve Management Plans [[tentative Order at section VIII.H.1], (5) determine that a management plan is not required [tentative Order at section VIII.H.3], and (6) approve time schedules within management plans [tentative Order at section XII].

Under the Water Code, the Central Valley Water Board may delegate tasks to the Executive Officer, as long as the delegation is not specifically prohibited by Water Code Section 13223. This delegation authority allows the Board to accomplish a number of important tasks necessary under the Water Code, tasks which might not be accomplished if the Board itself needed to formally approve their completion at board meetings scheduled approximately once every two months. Section 13223 does not prohibit the delegation of authority to set or implement monitoring or reporting requirements pursuant to Water Code section 13267. Nor does Section 13223 prohibit the Board from having the Executive Officer administer, enforce or implement permit requirements. Finally, Section 13223 does not prohibit the Executive Officer from establishing a method for determining compliance with the order. *Russian River Watershed Committee v. City of Santa Rosa* (9th Cir. 1998) 142 F.3d 1136; *CASA v. City of Vacaville* (2012) 208 Cal.App.4th 1438.

It is the common practice of the Executive Officer and Board staff, to periodically update the Board on progress, issues, and successes achieved in the implementation of Board approved orders, and this practice has been and will be implemented with all of the Irrigated Lands Regulatory Program orders, including the order if it is adopted. Such updates are done as part of public meetings at which interested persons can raise any issues of which they would like the board to be aware, in addition to the published Executive Officer's Report. In addition, the tentative Order includes additional information (see Attachment A, Information Sheet) regarding the ability of an interested person to seek board review regarding any plans or reports approved by the Executive Officer under this Order. The board may exercise its discretion to initiate the review of any document and decision.

Water Code section 13223 does not prohibit the Central Valley Water Board from delegating to its Executive Officer the tasks challenged by the commenter (see above numbered list). For Task 1 (approval of third party representative), the tentative Order would assign the Executive Officer the authority to determine and certify whether the eligibility criteria for third parties (set forth in the tentative Order) have been met. Because it pertains to administration of the tentative Order, assignment of this task to the Executive Officer does not violate Water Code 13223.

The commenter has mischaracterized tasks 2 and 3, as Sediment and Erosion Control Plans and Nitrogen Management Plans are not approved by the Executive Officer; instead they are prepared by the grower as required by the tentative Order. The templates to be approved by the Executive Officer will establish a particular format in which the plans are to be prepared, but do not establish the plans themselves. The plans themselves are a form or reporting required pursuant to Water Code section 13267 to document how their fertilizer use management practices meet the requirement to minimize excess nutrient application relative to crop consumption or how their sediment or erosion control complies with the Order's requirements.

Tasks 4, 5, and 6 all relate to preparation and approval of management plans and are not prohibited for delegation. Task 4 allows the Executive Officer to approve a management plan, which is triggered when sampling results indicate that growers associated with the monitoring site may be violating of the tentative Order's receiving water limitations. The management plans are reports that propose how growers in the relevant area will come into compliance with the receiving water limitations. These provisions therefore pertain to implementation and enforcement of the receiving water limitations in tentative Order.

For Task 4 (approval of management plans), as described in the tentative Order and the Information Sheet, the approval of management plans is directly related to evaluation of compliance with and enforcement of receiving water limitations and the time schedule for compliance. If the information submitted in the management plan reports is sufficient and meets the requirements of the Order, and the Executive Officer is assured that the growers in the area are taking appropriate action to come into compliance with the receiving water limitations within the allowable time schedule for compliance, the Executive Officer will not pursue enforcement. In fact, the revised language is modeled after receiving water limitation language contained in State Water Orders WQ 2013-0101 and 99-05, which are precedential State Water Board Orders instructing the Regional Boards how to pursue an iterative approach towards compliance with water quality objectives. Allowing the Executive Officer to approve management plans is therefore an authorization to approve a method of determining compliance with the receiving water limitations in the affected area in accordance with the board established Time Schedule for Compliance. This is not prohibited by Water Code section 13223. *Russian River Watershed Committee v. City of Santa Rosa* (9th Cir. 1998) 142 F.3d 1136; *CASA v. City of Vacaville* (2012) 208 Cal.App.4th 1438.

Task 5 (determination that a management plan is not required) is an outgrowth of the Task 4 compliance/enforcement task and is similarly not implicated by Water Code section 13223. Section VIII.I.3 of the tentative Order specifies the conditions on which a management plan is not required because compliance with the receiving water limitations is being achieved. Task 5 provides a formal avenue for the Executive Officer to communicate with the third party that the conditions of the Order no longer require a management plan. As mentioned in response to comment 9-13, the language for section VIII.I.3 of the tentative Order indicates that management plans are required as long as the problem that triggered the management plan requirement has not been resolved. Nevertheless, as discussed in regards to Task 4, the compliance determinations associated with the management plan reports are not implicated by Water Code section 13223.

Finally, Task 6 (approval of time schedule) is not prohibited by Water Code section 13223 because it simply instructs the Executive Officer to implement the time schedules within the Order itself. As authorized by Water Code section 13263(c), the tentative Order would set a time schedule for compliance with the receiving water objectives. That time schedule is specified in section XII of the tentative Order as follows: "the time schedule must be as short as practicable, but may not exceed 10 years from the date the [management plan] is submitted for approval by the Executive Officer. The proposed time schedule in the [management plan] must be supported with appropriate technical or economic justification as to why the proposed schedule is as short as practicable." As described in response to comment 9-11, the time schedule authorized by the Board is reasonable and consistent with time schedule provisions in

the State Water Board's regulations. In allowing the Executive Officer to approve the proposed time schedule, the tentative Order would essentially be giving the Executive Officer narrow discretion to implement the tentative Order's requirement to attain the receiving limitations in a timeframe that is as short as practicable, but in no more than 10 years from when a water quality problem is identified.

ATTACHMENT
RESPONSES TO COMMENT LETTER 9 ATTACHMENTS

Board staff was unable to determine whether the California Sportfishing Protection Alliance (CSPA) comment letter attachments were provided to support the contentions in CSPA's letter or whether CSPA intended for the board to consider additional comments in the attachments that were not reflected in the CSPA letter. Therefore, the responses to the attachments include both responses to comments made regarding the adequacy of the Order and the technical analysis. Board staff did not attempt to duplicate the summaries of or manipulation of data reflected in the exhibits.

Memorandum from Steve Bond to Mike Lozeau

A-1. Proposed WDRs lack a representative monitoring program

Comment summary: The proposed Waste Discharge Requirements lack a representative monitoring program and as a result are not protective of the beneficial uses within the Sacramento River watershed.

Response: Board staff contends that the proposed Order is, in fact, structured to include a representative monitoring program [see responses to CSPA comment 9-14]. Staff would like to point out that the written testimony from CSPA's consultant suggests that a representative monitoring program would be acceptable, although CSPA's consultant contends that such a program is not reflected in the Order. This suggestion that a representative monitoring program is acceptable is in contrast to CSPA's letter, which indicates that individual discharger monitoring is the only acceptable approach to evaluating compliance.

A-2. High quality waters not identified

Comment summary: The monitoring program required by the Order will not identify high quality waters, so it will not result in the implementation of best practicable treatment or control (BPTC) by those discharging to high quality waters nor will it adequately characterize adversely impacted or impaired waters.
Response: See response 9-8.

A-3. Overly dispersed, uneven monitoring locations

Comment summary: There are a small number of monitoring stations in a large watershed, and they are not equally distributed.

Response: As described in the Information Sheet, the Sacramento River watershed covers over 27,000 square miles. Approximately 1.7 million acres of irrigated farmland, or about 2,600 square miles, is covered by the Tentative Order. That farmland is not evenly distributed across the watershed, thus representative monitoring should not be expected to be distributed equally. Representative monitoring is described generally in the MRP and specifically to CSPA comments in response 9-14.

A-4. Downstream monitoring of major watercourses

Comment summary: Monitoring only the major watercourse of watershed at the most downstream point impedes the protection of the beneficial uses of all but the lowest elevations of these waterways.

Response: Monitoring sites are located in waterways that are representative of the likely effects of irrigated agricultural discharges on receiving waters in that area. Representative sites are located on creeks and agricultural drains that reflect the typical agricultural land uses and environmental outcomes of the represented areas. In a few cases, larger waterways are selected due to both access issues and to ensure sampling locations are near higher concentrations of agricultural land use in an area that otherwise has a low intensity of irrigated agriculture.

Management plans triggered by results from those representative sites are applied throughout the represented areas. Since the corrective actions are broadly applied, no portion of the watershed represented by a monitoring site will be disregarded. As described in the MRP, monitoring sites are representative of all areas and all types of irrigated agricultural waste discharge within the Order area. Further discussion of representative monitoring is found in comment response 9-14 and the MRP.

The commenter cites, as an example, monitoring on the Pit River which takes place in the middle section of this river that flows from north of the city of Alturas to Lake Shasta. The agricultural areas are largely above 3,000 feet elevation and have a short growing season. These farming areas are dispersed in distinct pockets along the rivers and creeks. The farming around Pitville, where the representative monitoring site is located, is very typical of the watershed: dominated by irrigated pasture and hay production. This site adequately represents the entire subwatershed because of the limited types of crops grown, and the similar types, timing and intensity of production practices across the subwatershed.
The commenter also seems to suggest that the Pit River monitoring site is flawed in that dilution of the discharges from irrigated agriculture occurs prior to collecting the sample. Staff does not believe this to be a flaw, but to reflect the reality of that particular subwatershed, which has a relatively low intensity of agricultural land use. In subwatersheds with a relatively small amount of agricultural land use, the potential impact of irrigated agricultural discharges will be attenuated by any dilution flows. Selecting a site that reflects that reality is important to gain an understanding as to whether the receiving water limitations are being met.

A-5. Evaluation technology through receiving water monitoring

Comment summary: Evaluating the effectiveness of a technology or a practice requires that the change in water quality attributable to the specific practice or technology be verified. To do that, a reference sample from the point of discharge and then a comparison sample taken from the same location after the technology or practice is implemented must be collected and analyzed.

Response: The proposed Order has provisions for field studies or individual monitoring, where necessary, but also allows for the evaluation of management practices using other approaches. The suggestion that taking multiple samples through discharge monitoring is the only method for evaluating whether a management practice is effective is inaccurate. Examples of other methods for evaluating the effectiveness of a management practice, include, but are not limited to:

1) Results from field studies or other research – field studies or research results can be used to estimate the effectiveness of a management practice. If multiple field studies have been done that demonstrate similar results for a practice under the same conditions experienced by a grower implementing that practice, it would be reasonable to assume similar effectiveness of that practice.

2) Application of accepted conservation standards (e.g., Natural Resource Conservation Service standards designed to address a given water quality issue) – the NRCS has conducted extensive research and has decades of experience in developing technical standards for conservation practices. Those standards provide valuable information and feedback regarding effective management practices.

3) Visual observation – for some practices visual observation may be sufficient – e.g., confirming a tailwater return pond pump is working and water is being returned to the head of a field; confirming that outer spray nozzles are off when spraying the outside row of an orchard with pesticides.

4) Evaluation of receiving water information combined with information on management practices implemented – correlations can be made between changes in the types of management practices being implemented in a watershed and the changes in water quality.

5) Common sense approaches – a field previously discharging tail water would not discharge tail water with the installation of a drip irrigation system. In that case, there would be no discharge to measure. If a grower no longer uses a pesticide identified as causing a water quality problem, there would be no justification to require the grower to monitor for that pesticide (for those pesticides that breakdown in the environment relatively rapidly).

The suggestion that sampling the discharge is the only method for evaluating effectiveness is flawed when the pathway for the pollutant to reach surface water is not via discharge of water from the site. For example, pesticides are at times sprayed onto crops in a manner that can lead to aerial drift. The pollutant pathway to surface water is through the air with subsequent deposition directly in the waterway or on the land (but necessarily on the discharger's land). The effectiveness of the management practices that would be employed to address drift would not be captured by measuring the discharge, and could, in fact, miss an important pollutant pathway contributing to a water quality problem.

Memo from Richard McHenry to Mike Lozeau

B-1. Objectives are not being met and existing high quality waters are not being maintained.

Comment summary: Findings and information in the WDRs indicate that represented irrigated lands are not meeting objectives, existing high quality waters are not being maintained, and representative practices are not protective of water quality.

Response: Staff does not claim nor does the Tentative Order suggest that objectives are met in all instances or that practices in place are protective of water quality in all cases. The Tentative Order is structured in a manner to address those water quality problems identified by the commenter, and limit potential degradation of high quality waters in compliance with the Antidegradation Policy.

B-2. Representative monitoring is not capable of determining an exceedance or effectiveness of management practices.

Comment summary: Sample collection at 38 "representative" surface water locations (mistakenly referred to as "discharge sites") is not capable of determining if any single discharge is the cause of downstream water quality standard exceedance, stream impairment, or whether agricultural management practices are effective. In order to determine of any single wastewater discharge exceeds water quality standards, it would be necessary to sample that discrete discharge.

Response: See response to comment A-5. Also, see staff's responses to related CSPA comments.

B-3. Farm discharges upstream would be diluted by other farm discharges before reaching the monitoring site.

Comment summary: The Sacramento River Watershed region has approximately 1.8 million acres of cropland under irrigation and 12,000 growers with waste discharges from irrigated lands. One can only conclude that farm discharges may be many miles upstream from a "representative" sampling location and that interlying farm discharges would cause significant dilution to any pollutants discharged.

Response: There is no evidence presented that would suggest downstream farm discharges are going to consistently be of higher quality than upstream farm discharges, and, therefore dilute any pollutants before reaching the sampling location. The commenter is referred to the Information Sheet, responses to Comment 9-14, and response to attachment comment A-3, and other staff responses to CSPA's characterization of the representative monitoring approach.

B-4. Failure to analyze samples for sublethal effects precludes determination of compliance with the Basin Plan Water Quality objective for toxicity.

Comment summary: Failure to analyze samples for sublethal effects precludes determination of compliance with the Basin Plan Water Quality objective for toxicity. It is also not possible to conclude that 1105 of the 1187 samples collected were not toxic since sublethal effects were apparently not analyzed.

Response: Conducting chronic toxicity testing can provide more information regarding the condition of a water body, but staff does not agree that lack of chronic toxicity testing precludes determination of compliance with toxicity objective. The Basin Plan discusses evaluation of the toxicity objective, but does not mandate the use of chronic toxicity testing to determine compliance (pages III-8.01, III-9.00, IV-16.00 to IV-18.00). The Order includes a process for establishing trigger limits to interpret the narrative toxicity objectives consistent with the Basin Plan provisions.

B-5. Statements related to the proposed Order and degradation.

Comment summary: The proposed WDR contains no restriction on degradation of surface waters up to the point of meeting water quality standards. Individual discharges are not regulated under the proposed WDR. It would seem impossible to state that best practicable treatment and control of a discharge is being provided when water quality has, and is, significantly degraded and there is no knowledge of what "treatment or control", if any, is being provided at any individual farm. It cannot possibly be in the interest of the people of California to have to trade the quality of their water for the interests of agriculture.

Response: The commenter's statement regarding lack of restrictions on degradation up to meeting water quality standards is not correct (see response to comment 9-9).

The commenter's statement indicating individual discharges are not regulated is incorrect. The Order applies to each individual discharger and the discharges from their land. The commenter incorrectly implies that the proposed Order or staff is suggesting that best practicable treatment or control is currently being provided in all instances. The proposed Order requires farming operations to meet the identified farm management performance standards. Those performance standards, in addition to the other planning and implementation requirements of the other, reflect best practicable treatment or control, and the tentative Order proposes an appropriate finding that the Order will result in the implementation of BPTC as applicable. (see response to comment 9-12). Through the Farm Evaluations, growers will be reporting on the practices they are implementing to comply with the proposed Order. Finally, the proposed Order includes requirements that will lead to improvements in water quality. It is, therefore, not accurate to suggest the proposed Order requires a trade-off between better water quality and the "interests of agriculture". Staff also believes that the comment suggests a stark separation of interests that does not exists, since the farmers governed by this proposed Order are included in "the people of California" and the people of California rely on farmers governed by this proposed Order to provide a reliable and safe supply of food and fiber.

Memorandum from Bill Jennings to Mike Lozeau

Comment summary: There is no information that justifies the conclusion that individual monitoring is an unreasonable financial burden. The cost of individual monitoring for large farms is $25.64 per acre for large farms. The potential costs of management practice implementation are more than five times the cost of monitoring. The Technical Memorandum Concerning the Economic Analysis of the Irrigated Lands Regulatory Program is not a comprehensive benefit/cost analysis.

Response: As discussed in previous responses (see, e.g. Response to Comment 9-3, and 9-14), the board is not obligated to select the most costly monitoring program available to evaluate compliance; instead monitoring requirements should be reasonable. In response to this attachment and comment 9-3, the Information Sheet has been updated to include greater detail regarding the projected cost of directly regulating growers. The commenter provided an estimate of surface water monitoring costs, but ignores other costs that would increase for the grower under an individual discharge monitoring program, including, but not limited to, the cost of preparing a quality assurance project plan, costs associated with individual groundwater monitoring, costs associated with the additional board staff that would be required to administer such a program. The commenter also assumes that the discharge from any large farm can be monitored at a single discharge point. In reality many farming operations consist of many parcels, often distributed across a growing region, with different soil types, different crops and crop rotations. Many farmed parcels will have no discernable discharge point, where there may typically no runoff, or runoff is discharged at many points, or across fields in sheet flow to adjoining properties or adjacent waterways. This is characteristic of non-point sources. In addition, the commenter focused on "large farming operations", but did not indicate what monitoring, if any, would be required of "small farming operations".

Finally, the statement that management practice implementation would be five times the monitoring costs does not account for the management practice cost being an average cost, while the proposed individual monitoring would be imposed on every grower. Those growers who are already implementing effective practices would have the same level of

monitoring as those growers not implementing effective practices, if the commenter's suggestions were adopted. The growers already implementing effective practices would have no additional management practice costs, but would have a large monitoring cost imposed.

The commenter indicates that the economic analysis is not a comprehensive benefit/cost analysis. In response, the board has no statutory obligation, under either CEQA or the Water Code to conduct a comprehensive benefit/cost analysis.